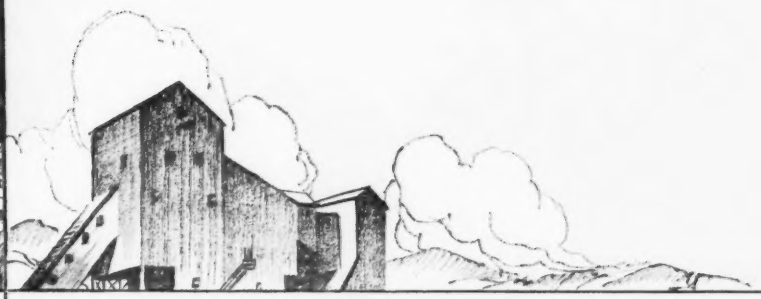
# The CRUSHED STONE JOURNAL

PUBLISHED QUARTERLY

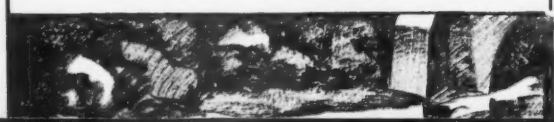
## In This Issue





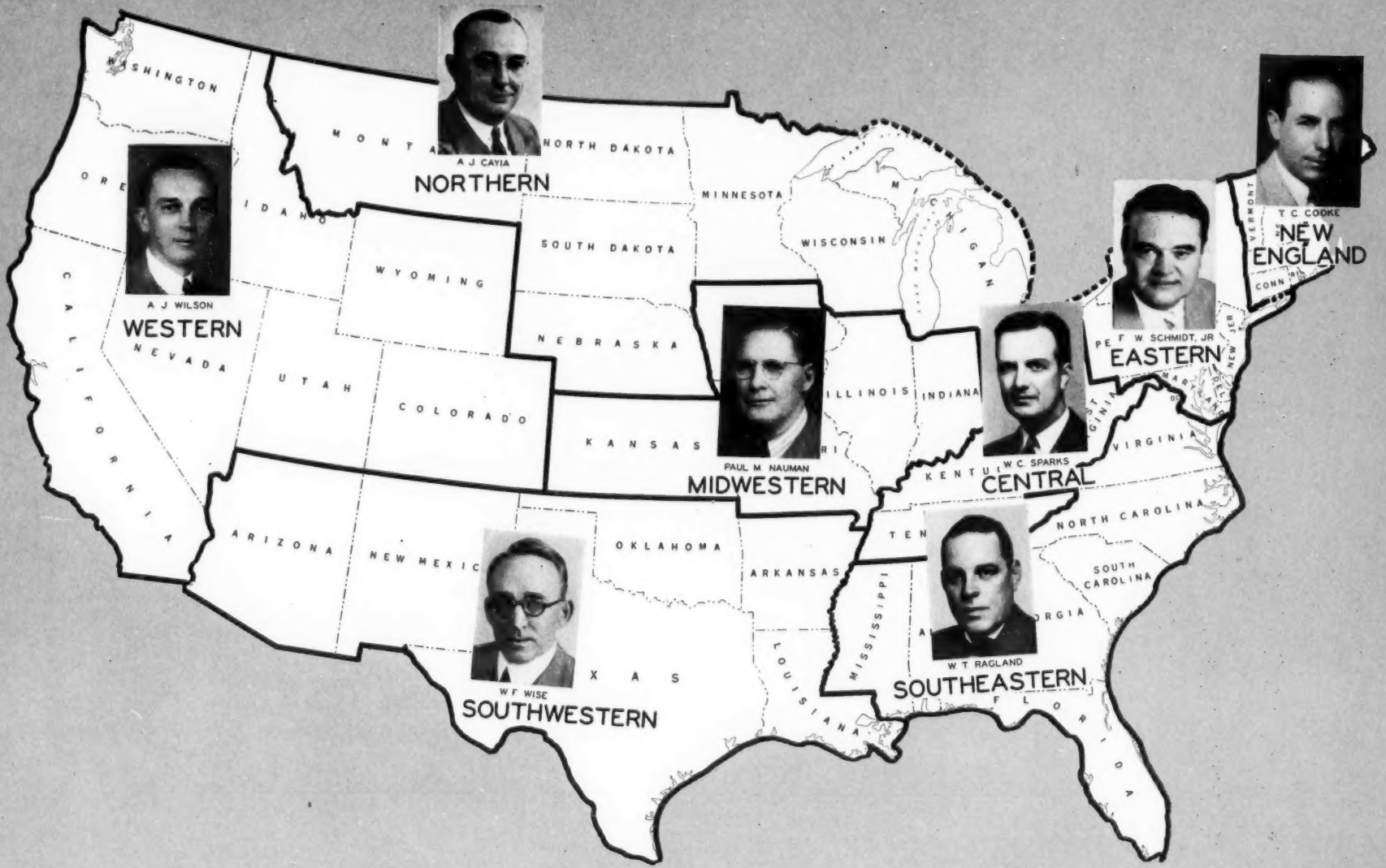
March · 1944

Official Publication
NATIONAL CRUSHED STONE ASSOCIATION



# REGIONAL MAP—NATIONAL CRUSHED STONE ASSOCIATION

(Revised 1944)



# The Crushed Stone Journal

Official Publication of the NATIONAL CRUSHED STONE ASSOCIATION

J. R. BOYD, Editor



## Contents

**FRED O. EARNSHAW**

**President, Carbon Limestone Company, Youngstown, Ohio, elected President of the National Crushed Stone Association at its 27th Annual Convention**

# THE CRUSHED STONE JOURNAL

WASHINGTON, D. C.

Vol. XIX No. 1 PUBLISHED QUARTERLY MARCH, 1944


## Twenty-Seventh Annual Convention Meets in New York City

THE Twenty-Seventh Annual Convention of the National Crushed Stone Association was held at the Hotel New Yorker, New York City, on January 31, February 1 and 2, 1944, with substantially over five hundred persons officially registered. Not since the early 1930's has our convention attendance reached such proportions, clearly indicating the wisdom of the Board of Directors in returning to New York for the annual meeting after a lapse of twenty-five years. It will be recalled that the only annual convention of the Association previously held in New York State was the Second Annual Convention, held in Buffalo in 1919. It is significant to note that on that occasion approximately one hundred were in attendance. In very favorable contrast was the almost record-breaking attendance at the meeting just concluded.

It is no secret that in selecting New York City grave doubts were entertained by some as to whether attendance at the various convention sessions could be maintained in view of the diversity of attractions offered by this metropolis. Such doubts proved groundless, for not only were the general group sessions of the convention attended in full force, but new records were set for the banquet and the luncheons on Monday and Tuesday, with 411, 326, and 355 in attendance respectively. Speaking of attendance records, the distinction of having the largest number of representatives present went to the New York Trap Rock Corporation, New York City, with fifty registered, and second honors went to The General Crushed Stone Company, Easton, Pa., with thirty registered. Considering the difficulties which must be experienced these days in traveling, it is highly gratifying to realize that members of the industry in such large numbers felt the need to foregather in annual convention to better implement their activities with the war effort.

Contributing greatly to the success of the meeting were the many excellent presentations made by representatives of governmental agencies with whom we have intimate contact, including the Mining Division, the Building Materials Division, and the Construction Machinery Division of the War Production Board, the Agricultural Adjustment Administration, the War Food Administration, the Office of Price Administration, and the Wage and Hour and Public Contracts Divisions of the United States Department of Labor.

In the field of highway construction we were privileged to have the opportunity of hearing from James J. Skelly, President of the Contractors' Division of the American Road Builders' Association, C. H. Sells, Superintendent of Public Works of New York State, H. A. MacDonald, First Vice President of the American Association of State Highway Officials and Commissioner, Department of Public Works of Massachusetts, and William J. Cox, Commissioner, State Highway Department of Connecticut. We are likewise indebted to G. M. Magee of the American Railway Engineering Association, R. S. Smethurst, Counsel for the National Association of Manufacturers, and Dr. L. Don Leet, Associate Professor of Seismology of Harvard University, for their participation in the program.

Space does not permit, nor does it seem desirable to give here any detailed description of the various papers presented to the Convention as they will subsequently be made available either through the columns of the Journal or by direct release.

WM. M. ANDREWS
Union Limestone Co.
New Castle, Pa.

FRED O. EARNSHAW
Carbon Limestone Co.
Youngstown, Ohio

G. A. AUSTIN
Consolidated
Quarries Corp.,
Decatur, Ga.

L. J. BOXLEY
Blue Ridge Stone
Corp.,
Roanoke, Va.

# EXECUTIVE COMMITTEE

of the

NATIONAL CRUSHED STONE ASSOCIATION

elected by the Board of Directors at its meeting in

New York City on February 1, 1944

OTHO M. GRAVES
General Crushed
Stone Co., Easton, Pa.

RUSSELL RAREY
Marble Cliff Quarries
Co., Columbus, Ohio

W. F. WISE
Southwest Stone Co.
Texas

A. L. WORTHEN
New Haven Trap
Rock Co., New
Haven, Conn.

To our various speakers, presiding officers, and participants in the many interesting discussions, we extend our grateful appreciation for their efforts in making this convention one of the best in our history.

Presided over in most commendable fashion by J. Reid Callanan and attended by over four hundred persons, our Twenty-Seventh Annual Banquet came up to every expectation. Major George Fielding Eliot, Columnist for the New York Herald-Tribune and Military Analyst for the Columbia Broadcasting System, proved intensely interesting as the feature speaker of the evening. Prior to his address, the safety awards for the National Crushed Stone Association Safety Contest were presented by P. N. Bushnell, Past General Chairman of the Cement and Quarry Section, National Safety Counsel. Of the fourteen plants winning distinction in the contest, thirteen had representatives present to receive the awards.

The exceptionally large number in attendance at the Greeting Luncheon on Monday, viewed with keen attention the official motion picture, "War Department Report." This picture is an outstanding contribution to our better understanding of the war and for those who did not see it in New York, we say by all means do so should opportunity present itself.

To the General Electric Company we are most deeply indebted for their courtesy in presenting the "House of Magic" at the General Luncheon on Tuesday, sponsored by the Manufacturers' Division. Greatly improved since its presentation at the World's Fair in New York, in a most entertaining manner this demonstration convinced all present that scientific facts can be stranger than fiction.

### F. O. Earnshaw Elected President

The election of officers took place at the session on Tuesday morning and in accord with the report of the Nominating Committee submitted by its chairman, J. A. Rigg, members of the Board and Regional Vice Presidents, as listed below, were unanimously elected. New Members of the Board include Milo Crouse, Manager, L. & M. Stone Co., Utica, N. Y.; E. Eikel, Vice President and General Manager, Servtex Materials Co., New Braunfels, Texas; Wilson P. Foss, Jr., Chairman of the Board of the New York Trap Rock Corporation, New York City; M. E. McLean, President and General Manager, East St. Louis Stone Co., East St. Louis, Ill., and E. K. Webster, Secretary-Treasurer, Pekin Stone Products Corp., Lockport, N. Y.

### Board of Directors

F. O. Earnshaw, *Chairman*, Carbon Limestone Company, Youngstown, Ohio
Wm. M. Andrews, New Castle Lime and Stone Co., New Castle, Pa.
G. A. Austin, Consolidated Quarries Corp., Decatur, Ga.
C. C. Beam, Melvin Stone Co., Melvin, Ohio
W. P. Beinhorn, Trap Rock Company, Minneapolis, Minn.
L. J. Boxley, Blue Ridge Stone Corp., Roanoke, Va.
J. Reid Callanan, Callanan Road Improvement Co., South Bethlehem, N. Y.
A. J. Cayia, Inland Lime & Stone Co., Manistique, Mich.
T. C. Cooke, Lynn Sand and Stone Co., Swampscott, Mass.
Milo Crouse, L. & M. Stone Co., Utica, N. Y.
Arthur F. Eggleston, John S. Lane & Son, Inc., Meriden, Conn.
E. Eikel, Servtex Materials Co., New Braunfels, Texas.
Wilson P. Foss, Jr., New York Trap Rock Corp., New York City
Otho M. Graves, The General Crushed Stone Co., Easton, Pa.
A. Acton Hall, Ohio Marble Company, Piqua, Ohio

**Newly Elected to the Board of Directors**


MILO CROUSE


E. EIKEL


WILSON P. FOSS, JR.


M. E. MCLEAN


E. K. WEBSTER

Geo. F. Hammerschmidt, Elmhurst-Chicago Stone Co., Elmhurst, Ill.
R. P. Immel, American Limestone Co., Knoxville, Tenn.
E. J. Krause, Columbia Quarry Company, St. Louis, Mo.
W. H. Lindsay, Canada Crushed Stone, Ltd. Hamilton, Ontario, Canada.

AMONG THOSE PRESENT FROM THE NEW YORK TRAP ROCK CORPORATION

M. E. McLean, East St. Louis Stone Co., East St. Louis, Ill.
Paul M. Nauman, Dubuque Stone Products Co., Dubuque, Iowa.
W. T. Ragland, Superior Stone Co., Raleigh, N. C.
H. E. Rainer, Federal Crushed Stone Corp., Buffalo, N. Y.
Russell Rarey, Marble Cliff Quarries Co., Columbus, Ohio
John Rice, The General Crushed Stone Co., Easton, Pa.
J. A. Rigg, Acme Limestone Co., Fort Spring, W. Va.
H. E. Rodes, Franklin Limestone Co., Nashville, Tenn.
Dan Sanborn, Lehigh Stone Company, Kankakee, Ill.
James Savage, Buffalo Crushed Stone Co., Buffalo, N. Y.
F. W. Schmidt, Jr., North Jersey Quarry Co., Morristown, N. J.
W. C. Sparks, Cedar Bluff Quarry, Princeton, Kentucky
O. M. Stull, Liberty Limestone Co., Rocky Point, Va.
W. H. Wallace, Wallace Stone Co., Bayport, Michigan
E. K. Webster, Pekin Stone Products Corp., Lockport, N. Y.
W. S. Weston, Weston & Brooker Co., Columbia, S. C.
D. L. Williams, Virginian Limestone Corp., Ripplemead, Va.
A. J. Wilson, Granite Rock Company, Watsonville, California
W. F. Wise, Southwest Stone Company, Dallas, Texas
A. L. Worthen, New Haven Trap Rock Company, New Haven, Conn.

Representatives of the Manufacturers' Division on the Board:

Milo Nice, Hercules Powder Co., Wilmington, Delaware
J. Harper Fulkerson, Cross Engineering Company, Carbondale, Pa.
L. W. Shugg, General Electric Co., Schenectady, N. Y.

During the deliberations of the Nominating Committee it developed as advisable, in its judgment, to have the Constitution and By-Laws amended to provide for honorary membership on the Board of Directors. The Nominating Committee, therefore, suggested to the Committee on Constitution and By-Laws that the latter "give earnest and careful consideration to the wisdom and propriety of providing in the Constitution and By-Laws an honorary membership on the Board of Directors, in which group could be placed, without right to vote, any persons worthy of that honor and distinction." The Constitution and By-Laws Committee so recommended and by action of the convention an amendment to this effect was adopted.

Upon recommendation of the Nominating Committee, in accord with this amendment, A. J. Blair, first President of the Association, Stirling Tomkins, former member of the Board and Executive Committee, now with the Red Cross in North Africa, and Harold

AMONG THOSE PRESENT FROM THE GENERAL CRUSHED STONE COMPANY

Williams, member of the Boston Bar and for years a member of the Board of Drectors, were elected to honorary membership.

Upon recommendation of the Nominating Committee the following Regional Vice Presidents for the regions indicated were unanimously elected. With the exception of F. W. Schmidt, Jr., elected Regional Vice President for the Eastern Region, to take Mr.

Earnshaw's place, all other Regional Vice Presidents were continued in office for another year.

Eastern—F. W. SCHMIDT, JR.
New England—T. C. COOKE
Midwestern—PAUL M. NAUMAN
Southeastern—W. T. RAGLAND
Central—W. C. SPARKS
Northern—A. J. CAYIA
Western—A. J. WILSON
Southwestern—W. F. WISE

In concluding his report and with dramatic effect, Mr. Rigg addressed the convention as follows:

"When it came to the consideration of the nominee for the Presidency, there was one man who stood outstandingly in the minds of a large number of the Committee, and when his name was presented to the Committee, I want to say in all sincerity that it was received with spontaneous unanimity.

"The man whose name I'm going to mention in just a moment is a man of retiring nature. He is much adverse to getting in the limelight or being publicized in any manner whatever. Notwithstanding the fact that he has not been a man of words, and has been modest to the extreme, he has been a man of deeds behind the scenes. In the early days of this Association when we encountered financial troubles from time to time, and when there were many difficulties to be overcome, he gave his quiet, liberal and loyal support to this Association through those years.

"Knowing the characteristics of this man, when the Committee decided, as I say, spontaneously and unanimously that he was the man they wanted to guide our destinies for the next year, we thought it best to send a committee to see him, to see what his reaction would be. Some time elapsed before the committee returned. We began to grow a little bit uneasy as to whether or not their mission was successful, and when they came back we found that, with his usual modesty, he was appalled at the publicity and the limelight it might bring him; but felt very deeply, and expressed with much emotion, his appreciation of the honor which we desired to confer upon him.

"I've known this gentleman since I've been a member of this Board and some of you have, but there are others who because of his reserve don't know him so well; but I want to say this to you, it isn't hard to penetrate that reserve and when you do you will find in Fred Earnshaw one of the biggest and softest hearts in the Association."

BREAKFAST MEETING OF THE MANUFACTURERS' DIVISION, NEW YORK CITY, FEBRUARY 1, 1944

(On mention of Mr. Earnshaw's name, the audience spontaneously arose and accorded him extended applause.)

"I want to make a suggestion to you, Mr. President, and I hope I'm not presumptious. Mr. Earnshaw lives in the State of Ohio and I understand his business is over the line in the State of Pennsylvania, and I would like to suggest that you ask Mr. Rarey from the State of Ohio and Mr. Graves of the State of Pennsylvania to escort him to the rostrum."

MILO A. NICE
Hercules Powder Co., Wilmington, Del., Elected Chairman, Manufacturers' Division

With continuing applause, Mr. Earnshaw was unanimously acclaimed president and escorted to the platform by Messrs. Rarey and Graves.

Deeply moved and in characteristically few words President Earnshaw expressed appreciation for the honor and pledged his best efforts in carrying out the duties of the office to which he was elected.

### Board of Directors Elects Officers and Executive Committee

The newly elected Board of Directors in its meeting on Tuesday afternoon, February 1, re-elected William E. Hilliard, The New Haven Trap Rock Company, New Haven, Conn., Treasurer; A. T. Goldbeck, Engineering Director, and J. R. Boyd, Administrative Director. The following directors were elected to serve on the Executive Committee for the ensuing year:

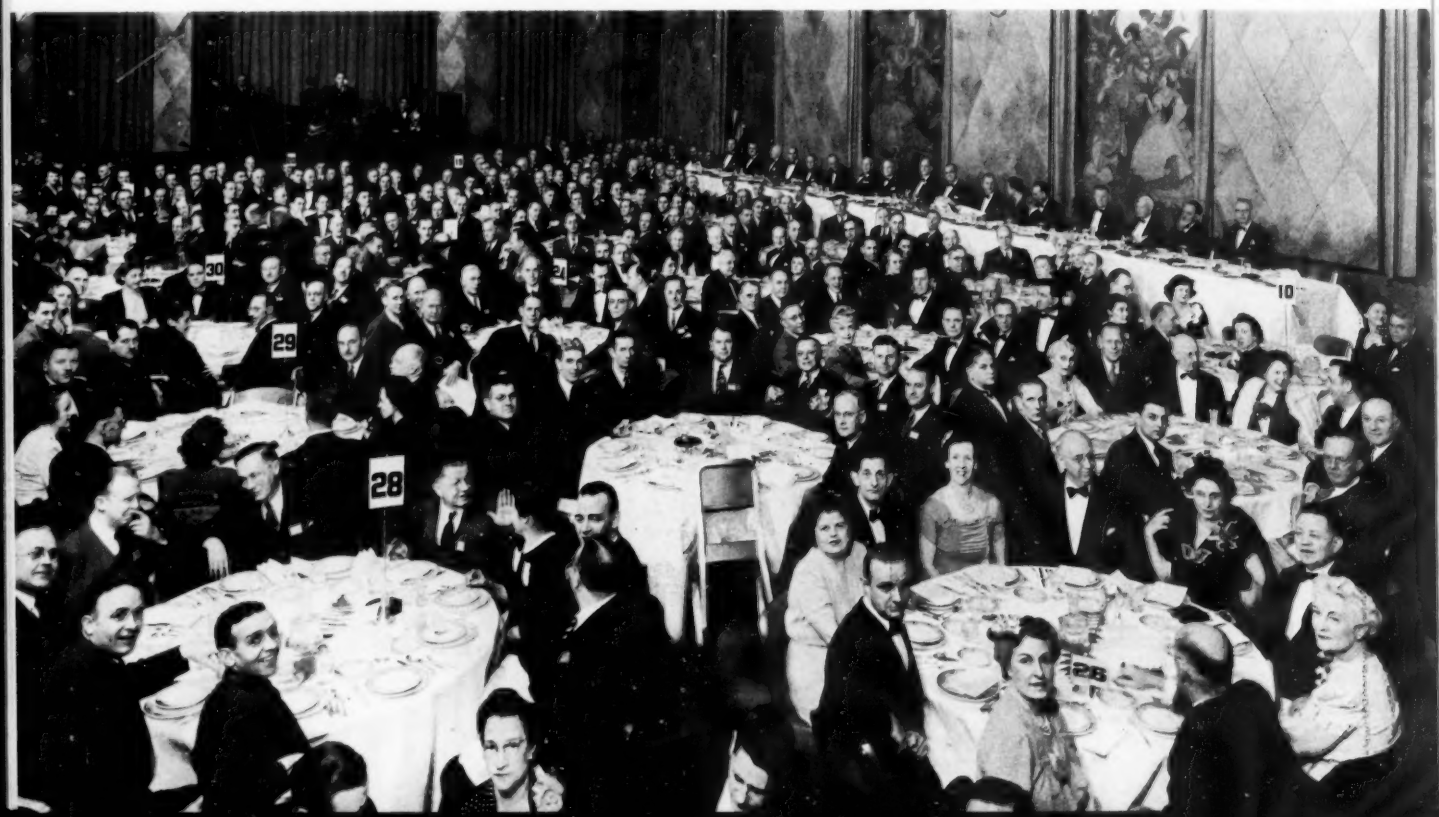
| | |
|---|---|
| F. O. EARNSHAW, *Chairman* | OTHO M. GRAVES |
| WM. M. ANDREWS | RUSSELL RAREY |
| G. A. AUSTIN | W. F. WISE |
| L. J. BOXLEY | A. L. WORTHEN |

### Milo A. Nice Elected Chairman of Manufacturers' Division

At an exceptionally well attended breakfast meeting of the Manufacturers' Division, held on Tuesday morning, February 1, Milo A. Nice of the Hercules Powder Company, Wilmington, Delaware, was elected Chairman of the Manufacturers' Division to succeed J. Harper Fulkerson. Mr. Nice justly deserved the honor accorded him for his long and help-

(*Continued on page 34*)

### In Attendance at the 27th Annual Banquet



# Report on Business Conditions During 1943 and the Outlook for 1944[1]

## A Summary of Reports by Regional Vice Presidents

By WM. M. ANDREWS
President, National Crushed Stone Association

THE over-all picture of 1943 is not too good and the outlook for 1944 is even worse. Some sections of the country had fair business but for the country as a whole, there was a decided drop in production. And the reports of the Regional Vice-Presidents indicate that this downward spiral will continue during 1944.

Mr. Cook, reporting for the New England Region, states that the producers in this region expect a decided pick-up in business within six months after the end of hostilities in Europe. We will all join him in his closing sentence "Please God this may come soon." In detail his report indicates the volume of crushed stone business during 1943 averaged 55 per cent of the 1942 volume with prices the same except for one producer who reported 4 per cent lower prices. The volume of demand averaged only 40 per cent of capacity with little variation from this average figure. Of this small demand, highway construction absorbed only 30 per cent—ballast 30 per cent—building 25 per cent and other uses 15 per cent. For 1944 all producers stated the outlook was very poor and anticipated no change in the price structure. Uncertainty is shown for the distribution of demand for 1944 but the majority feel it will be close to 1943 demand. No serious transportation difficulties were encountered due to abnormally low business. The manpower shortage was experienced by all and with some it was acute and all agree that it will be difficult to obtain labor this year if there is any business. Some quarries in this region did not operate at all in 1943 and it seems likely that most of them will be down or only run a few months in 1944.

Mr. Cayia, reporting for the Northern Region, expressed his regret at being unable to attend and wished us a very successful meeting. His report shows a somewhat better picture and were it not for a boat shortage due to ODT regulations, with his own company, it would have been much better. The volume of stone business in this region ran from 50 per cent greater than 1942 to 50 per cent of 1942 with little change in the price level. The percentage of the business ran from a high of 90 per cent RR ballast to none for one company. Highway stone ran from 75 per cent to 10 per cent. Demand for chemical and metallurgical stone was very good but was restricted by the boat shortage. One company expects as good business in 1944 due to the high volume of railroad ballast but the others expect a slight decrease. No serious difficulties were experienced in transportation by either rail or trucks, nor was there any serious manpower shortage, but the 1944 picture is not so good in this respect.

The report of Fred Earnshaw for the Eastern Region is somewhat better than the average due to the demand for fluxing stone as here the volume was over 70 per cent of that of 1942 with little change in the price level. Demand was less than 50 per cent of plant capacity as a whole but a few sections had capacity operations due to war work and flux stone demand. Highway construction was poor with only maintenance work and access roads as a nucleus. There was a slight increase in railroad ballast but agricultural limestone shipments fell off in the eastern section. The entire region was affected by the manpower shortage and the outlook for this during 1944 is poorer. Most companies report they expect less business in 1944 due to less highway work and to the growing manpower shortage. Quite a few companies were shut down completely, especially in Pennsylvania, and some will never re-open.

The very complete report by Mr. Sparks for the Central Region does not add joy to our general picture, for while one producer's business was increased over 40 per cent due to Government construction, some report a 60 per cent reduction under 1942 volume. However, prices were no less and in a few cases higher. Since some producers reported on plant capacity calculated on production possible with the

[1] Presented at the Twenty-Seventh Annual Convention, National Crushed Stone Association, Hotel New Yorker, New York City, January 31-February 2, 1944.

manpower available, it is not possible to judge except that it was less than in 1942. Shipments show a wide variation with railroad ballast and chemical and metallurgical stone in the van and highway construction falling off. The agstone situation was slightly better. All producers report they expect a lower demand in 1944 but do not anticipate any change in the price structure. Demand in 1944 is expected to increase slightly in chemical and metallurgical stone and agstone with no change in railroad ballast and a decrease in all other uses. Little difficulty was experienced in rail shipments and little is expected in 1944. But the trucking situation presents a different picture as difficulties were experienced in securing tires and parts in 1943 and even greater difficulties are expected in 1944. While one producer experienced no difficulty with manpower in 1943 the majority advised conditions were very bad. One producer states, "Better workers have either been drafted or have gone into other fields offering better pay. Only the older and handicapped men remain. Since many plants are operating with less than 70 per cent of normal personnel, maintenance and repair work suffer and costs are higher due to inefficiency and overtime. No relief is offered through employment of returned soldiers since they are not physically able to undertake quarry work."

The Midwestern Region reports volume from only 50 per cent of 1942 to 50 per cent over 1942 with practically no change in the price structure. Except for part of the year in the Chicago district, demand was considerably below capacity. In keeping with the rest of the country, highway construction was generally lower while railroad ballast took from 15 per cent to 50 per cent of production. Demand for stone for building purposes was also lower while agstone showed a slight increase. A few producers had good business in chemical and metallurgical stone while one producer shows 35 per cent of his production went into defense projects. Producers in this region are about equally divided when it comes to the prospects for 1944 as some expect better conditions while others look for a decided decrease. No serious transportation difficulties were encountered during 1943 but all except one producer look for difficulties in both rail and truck transportation this year. While the manpower situation has been serious in some sections, most producers do not complain about 1943 conditions but all unite in predicting serious difficulties in 1944. Paul Nauman in making this report states that his section is still troubled with local sub-divisions still insisting on producing their own requirements.

When we get down South the picture shows a slight improvement as only one producer reports a lower tonnage in 1943 than in 1942 and none report lower prices. As the volume of demand ran from 75 per cent to 100 per cent of capacity, the rest of us can still be envious of their year. Mr. Ragland's report shows the same condition in regard to highway work as it shows considerable falling off from a normal year. Railroad ballast took from 2 per cent to 40 per cent of production and one company reports 90 per cent of its production went into building construction. While all producers expect slightly less business in 1944, Mr. Weston seems to be the real pessimist as he says his prospects are rather blank. A few producers look for lower prices but the majority expect prices to remain the same. While a few producers had transportation difficulties in 1943 the majority did not and do not expect much greater difficulties during 1944. The manpower shortage effected many producers but some said it was not as bad as expected and all predict more difficulty in this respect during 1944.

The report of Mr. Wise for the Southwestern Region shows both the volume of business and the price structure were approximately the same during 1943 as in 1942 and the volume of demand was 90 per cent of capacity. Federal Defense Projects took 50 per cent of the production—railroad ballast 30 per cent—highway work 17 per cent and the remaining 3 per cent for all other uses. This region expects about a 50 per cent drop in production in 1944 but no great change in prices. This seems to be due largely to the drop in Federal Defense Projects from the 50 per cent of last year to 5 per cent during 1944. While no serious transportation difficulties were experienced during 1943, producers are looking for a car shortage this year. Skilled men were hard to keep in 1943 and while common labor was available, it was very inefficient. This year it is expected the supply of both skilled and common labor will become critical. While defense construction has been practically completed in this area, an increase is expected in both railroad ballast and stone for heavy construction if labor is available.

Immediately prior to leaving home, I received a telegram from Jeff Wilson, Regional Vice-President for the Western Region, so that now our picture for the whole country is complete. As this telegram was short and complete, I will read it:

(*Continued on page 33*)

# Shall We Win the War Without Winning the Peace?[1]

By JAMES J. SKELLY

President, Contractors' Division
American Road Builders' Association

MARK TWAIN once said, "Many people talk about the weather but few do anything about it." This saying may be likened to the Postwar Program, many people are talking about it but few people are doing anything about it.

There has been a lot of talk about postwar planning. One magazine editor recently reported that several hundred articles had landed on his desk, each one promoting some scheme or other to establish a great and new kind of future. Probably those proposals contained a lot of sound ideas. The trouble, as I see it, is that there is not enough agreement on what should be done.

One gratifying movement is that of the Committee for Economic Development, which is a nation-wide association of business men organized to marshall the forces of business and industry to help ease the shift from war to peace. That organization is bringing private business to realize its responsibilities, to prepare now, and to make every possible job available.

But, gentlemen, that fine work is not sufficient in itself. I do not say that in criticism; I say it in the sense that private business cannot do the job alone. We cannot afford to put all our eggs in one basket. We must take out some form of insurance.

To better understand what I am driving at, let's look at a few facts. Today, almost exactly one-half of the entire working population of the country is directly involved in the war effort, either in the Army, the Navy or the Marines, or in the war plants and offices. That means approximately 30,000,000 Americans, are necessarily being sustained by government.

Allowing for the retirement of many over-age and under-age workers and many women, there still will be 5,000,000 to 8,000,000 more employable people after the war than there were in 1940. Authorities are in general agreement that when the war ends 20,000,000 or more workers and Servicemen will be searching for jobs.

Now, I want to mention something that many of us have forgotten. And that is—we did not lick the depression we had back in the thirties. That is a fact. The depression was whipped—but it took a second World War to do the job for us. If you look at the records, you will find that in 1938 we struck what some of our government leaders preferred to call a "recession". Well, to me it was the beginning of another real depression. We got out of it all right, because the British and French started to buy war materials. Oh yes, and so did Japan—scrap iron and petroleum. Belatedly, too, our own country began to equip for war. Had not the war come along I very much fear we would have landed right back in the depression.

Friends, those are facts. And those facts tell us very plainly that we had better get busy and get something on the books besides mere talk.

We are fully aware that in the last depression, with an appropriation of some $3,300,000,000 to the P.W.A., it was nearly eighteen months before the first project was ready to award, due to the fact that plans were not ready, that financing and rights-of-way had not been provided for.

Of all the plans and suggestions I have heard about, there is one plan that stands out as a real solution which we can ill-afford to pass over. That is the Postwar Highway Plan of the American Road Builders' Association which was first announced last spring by Charles M. Upham, Engineer-Director of the Association. Every person in the highway industry, or who in any way is associated with the highway industry, should work and work hard for that Plan, not because it means money in your pockets but because it is a Plan that will create general business activity and it will mean jobs. It will mean too that we will have no need for WPA or some such alphabetical combination that only can spell disillusionment and despair for your and my boys who today are fighting for us overseas.

I will describe only a few of the findings on which the Plan was based, but I can assure you it is a Plan that has its feet on solid ground.

[1] Presented at the Twenty-Seventh Annual Convention, National Crushed Stone Assn., Hotel New Yorker, New York City, January 31-February 2, 1944.

For instance, it was discovered that production of durable goods and construction together form a part of the national economy so important that unless this part of the industry is active, then it just is not possible to have prosperity Durable goods—you fellows should know what that is; you produce it. It includes all things that do not wear out quickly, such as machinery, railroad rolling stock and rails, all construction materials, and construction itself. Construction, however, is the most important part of durable goods for it accounts for about one-half of all durable goods production.

Now let me show you how important are the twins —durable goods and construction. In the last depression, at its very depths, some 13,000,000 men were out of work. Based on studies of traceable workers, nearly half of those jobless men were fellows who had worked on construction jobs or in the mines and quarries, the mills, the factories or who otherwise had jobs dependent upon construction. Think of it—half of the jobless were men who were forced to leave construction and durable good payrolls.

Obviously, if we want to have prosperity in the postwar years, we must try to duplicate the things that produced previous prosperous periods. That's the basis of the American Road Builders' Association Plan. So a starting point is to make sure that there is a large construction program, which would, of itself, place a lot of men at work, and which would generate additional employment in all business and industry. Construction is the one thing that we can set up as a postwar activity without guesswork, and which can and will go ahead. It is just about the only insurance we can take out.

What kind of construction shall we do? It doesn't matter a great deal. Both private and public construction use about the same materials and equipment and they both require lots of workers. Authorities agree there will be a great demand for private construction, with estimates for private housing alone running as high as $5,000,000,000 per year. Yet the trouble is, no one can say with certainty in advance, just how much private construction will be undertaken. Private construction is naturally variable; it fluctuates widely from year to year; it cannot be controlled. Consequently, we must turn to public construction and establish a backlog of blueprints that can be called upon as private construction slacks off. Public construction can be quite accurately predetermined and it is easily controlled. We can make it fit the needs.

When I speak of public construction I want it distinctly understood that I do not mean WPA notes or any other scheme for improvised relief work.

Another important question is just how much construction should there be. The American Road Builders' Association's economic studies answer that one too. The studies have established that because of the tremendously high national debt and the necessity for high tax rates, we must have a high national income, good wages and practically full employment. Also, the national income must be high enough so that citizens may pay their taxes and have enough left over to buy back the goods produced.

The studies show that to be in economic balance the workers of this nation must have a combined income in excess of $100,000,000,000. In recent periods of prosperity, construction accounted for from 12 to 15 per cent of the national income. Depression conditions arose whenever construction fell below 12 per cent. So to reproduce prosperous periods at least 12 per cent of the national income must come through construction. On that basis, and for complete insurance against the threat of depression, the annual construction program, both public and private, should total approximately $15,000,000,000 per year. Authoritative and exhaustive studies made by other agencies, as well as the American Road Builders' Association with consideration of the experience of the prosperous 20's, point to a yearly private construction program of approximately $10,000,000,000. Public works construction therefore should total $5,000,000,000 per year.

Because of the widespread needs and the ability to get projects started quickly, highway construction should approximate $3,000,000,000 per year for at least a five-year period. With all governments participating, federal, state, county, city and local governments, that objective should not be too difficult to obtain.

An entire speech could be given on the subject of highway needs alone, so I will only take time to give you a broad picture.

Urgently needed construction on the four general classes of highways—state, city, metropolitan and county—amount to a total of $15,000,000,000. A survey conducted jointly by the American Road Builders' Association and the American Association of State Highway Officials revealed needed construction on state highway systems costing upwards of $7,000,000,000. The city and metropolitan survey of the American Road Builders' Association indicated

needs totaling $4,000,000,000 and the American Road Builders' Association survey of county requirements revealed needs of county and local roads totaling another $4,000,000,000.

As you gentlemen well know, even before the war the road and street systems were far short of actual needs. Particularly in city and metropolitan areas, little had been done to make automobile operation safe and speedy. You all know about the Pennsylvania Turnpike. That highway is the only one of its kind which extends for any noteworthy distance. In the postwar period if we are to have the kind of world we all want, there must be more highways like the Pennsylvania Turnpike.

Recently the Public Roads Administration transmitted to Congress a report recommending progressive construction of a 34,000-mile network of modern highways—a transcontinental network brought to the highest standards of construction. The heavily travelled sections of that system would be express highways. The cost is estimated at $750,000,000 annually with the program spread over a period of from ten to twenty years.

This proposal of the Public Roads Administration greatly strengthens the Plan of the American Road Builders' Association. In fact, the American Road Builders' Association has been urging the necessity of such a system for almost a decade.

Another very important feature of the American Road Builders' Association Plan, is that it would foster and extend private enterprise. Improvised relief work with little to show for the time and money spent, is little better than a dole. The American Road Builders' Association Plan is predicated on the demand that all public works construction shall be done through the contract method. That forms an ideal way of providing a large number of jobs with the same economies and efficiencies that are obtained in private business. Men who work on construction projects built under the contract method, are men who have the same incentives for gain and advancement as those who work for any other type of private business. No charity whatsoever is involved in sound planned public works construction. That is a real selling point.

In postwar years, it will be imperative that every construction dollar be made to produce full value. Large savings are the natural consequences of the contract method. Recently comparative studies were made which forcefully dramatized the possible savings. Fifty-three highway projects were advertised for bids by the state highway departments. After the bids were obtained, the state highway departments then did the construction work themselves under force account. The accurate cost figures kept showed that the total cost of construction by the force account method on the average was 18 per cent higher than the prices bid by contractors.

Viewed from every angle, highway construction offers an ideal insurance for postwar employment and business activity. Highway construction is a vitalizer of business in general. Highway construction meets an actual and urgent need of the public, and it adds to the national wealth. Highway construction would give jobs where jobs are needed and it would use facilities and manpower that are readily available.

Let's compare a $100,000,000 program by the contract system and see how the money was spent. This distribution of road funds came from a field study by the U. S. Public Roads Administration on active highway projects and applied to a $100,000,000 program. This outlay would put about 100,000 men (based on 1940 dollar) to work for a year.

| | |
|---|---|
| Equipment (Cost at Source) | $16,700,000 |
| Materials (Cost at Source) | 33,480,000 |
| Transportation | 15,270,000 |
| Equipment Operation | 4,590,000 |
| Insurance, Taxes, etc. | 6,310,000 |
| Job Labor | |
| a—Surfacing | 11,270,000 |
| b—Grading | 8,270,000 |
| c—Structures | 4,110,000 |
| Total | $100,000,000 |

The Plan can be placed in effect promptly upon conclusion of the war for thousands and thousands of Servicemen, it would provide a natural outlet for their training and ability. The men who today are driving trucks, bulldozers, half-tracks, and other Army equipment, are men that can shift to road and street construction without any additional training. Importantly, construction equipment will be on top. Construction equipment manufacturers in general today are turning out machines for war which differ little from peactime construction equipment. No time will be lost by many manufacturers in meeting the needs of peacetime.

You men who are in the crushed stone industry, I might say, are at the fountain-head of highway construction. To place the American Road Builders' Association Postwar Highway Plan in operation will require the combined and concentrated efforts of the entire highway and industry division. You can be of

(*Continued on page 34*)

# Postwar Planning of Public Works in the State of New York[1]

By CHAS. H. SELLS

**Superintendent of Public Works**
**New York State, Albany, N. Y.**

THE subject of postwar planning throughout the nation is receiving considerable attention. The primary object of each and every citizen is to bring this war to a victorious conclusion at the earliest possible moment, and nothing should be allowed to detract from or interfere with this object. Postwar planning, as it is called, therefore, must occupy a secondary place in everybody's activities even though it very properly can be assumed that in a certain way postwar planning is allied to the war effort in that it is designed to provide the means of livelihood for many of the members of our Armed Forces who have already completed their tour of service and who will shortly after the war return home ready to resume their peacetime obligations. Many millions of civilian workers likewise will be released from plants engaged in manufacturing articles of war and will be available for their customary employment.

It is already recognized that private industry will rapidly adjust itself in meeting the ever increasing demands of the American public for peacetime goods for civilian consumption, but there is liable to be a hiatus or a gap in the steady stream of employment which might require stimulation from other sources. However, practically every state, country, and municipality in the nation during the years of the war, on account of their desire not to interfere with the processes of war, and for many years before the war due to the stringency of local financing under depression conditions, have failed to develop their community needs as their growth required. These agencies, therefore, have created a backlog of staggering proportions—all needed public municipal improvements.

It is fitting and proper that everybody look ahead to the postwar era and make plans therefor. The group most concerned with this problem and most able to cope with it is found in the governing officials of states, counties, and municipalities. They are the people charged with the responsibility, not only of administering their affairs under war conditions and in cooperation with the Federal Government in the interest of the war, but also in planning for the future welfare of their subdivisions. These principles were early recognized in New York State when, in 1942, there was created by action of the Legislature a Postwar Public Works Planning Commission. This Planning Commission was not created for the purpose of drawing a multi-colored map predicting the future development of the State of New York and of its innermost recesses through a period of the next forty or fifty years, but was designed and organized for the specific purpose of coordinating, stimulating, and preparing a program of worthwhile postwar public works construction by the State of New York, by its counties, towns, cities, and villages, which could be put into immediate and effective operation when the war ends in order to provide an effective and economic utilization of the State's resources and to provide jobs for returning veterans and unemployed war workers.

To date, $3,450,000 has been appropriated to this commission, of which $150,000 was earmarked for administrative purposes. The balance was to be used to defray the cost of preparation of plans and specifications for state projects as well as to provide subsidies to the municipalities, subdivisions of the state, to assist them in the preparation of plans and specifications for local projects. This commission is charged with the responsibility of recording the progress of design of these various projects; of determining the status, scope, cost, employment possibilities, material and equipment requirements for each project; and to assist in making labor, materials, and equipment available for these purposes. The commission is further authorized to allocate funds to supervise and record the progress of the preparation of plans; to coordinate activities between the State and the local municipalities; and to maintain liaison with all Federal agencies that might be concerned with postwar planning. The commission is also empowered to coordinate the efforts of other state departments in the preparation of plans for projects specifically authorized by legislation.

[1] Address before the Annual Meeting of the National Crushed Stone Association, Hotel New Yorker, New York City, February 2, 1944.

The membership of this commission is composed of seven, three of whom are members of the State Legislature and four appointees of the Governor. The chairman is selected by the Governor. The membership at present consists of the Chairman, Honorable John E. Burton, Director of the Budget of the State of New York; Honorable Frank C. Moore, State Comptroller; Honorable Charles D. Breitel, Counsel to the Governor; and Honorable M. P. Catherwood, Commissioner of Commerce; all appointed by the Governor; and also Honorable Arthur H. Wicks, Chairman of the Senate Finance Committee; Honorable D. Mallory Stephens, Chairman of the Assembly Ways and Means Committee; and Honorable Julius J. Gans, a member of the Assembly Committees on Labor and Social Welfare.

One of the outstanding provisions of this legislation is the recognition of the inability of the State and the various municipalities, through their regularly constituted engineering and designing departments and bureaus, to meet the stepped-up and required speed of preparation of plans. All of these departments have sent many of their trained and seasoned employees into the Armed Forces and into essential war work, with the result that all such departments are substantially undermanned and unable to keep pace even with the normal routine program of design. The law, therefore, provided for the employment of consulting services in the preparation of these plans and specifications to the end that every available bit of engineering and architectural talent in the state might be brought to bear on the successful prosecution of this idea.

Nineteen forty-two was spent primarily in organizing and preparing the machinery necessary for the operation of this program, and after minor amendments to the law, the commission really started to function productively in 1943.

It is appropriate to note at this time that any address on this subject might better be delivered by a member or an employee of the Planning Commission as the entire administrative control rests with the commission. The Superintendent of Public Works is not a member of this commission—and properly so. His functions are confined to advising the commission as to the desirability and adaptability of projects in the local municipal program; the designation of consulting services necessary in the State program; and the supervision of the preparation of plans to be ultimately prosecuted under the direction of the Department of Public Works. The Planning Commission is precluded from giving favorable consideration to any municipal project which is not first approved by the Superintendent of Public Works.

In order to outline definitely the detailed procedure involved in the operation of this plan, it is necessary to divide the discussion into the program's two component parts—the Municipal Program and the State Program.

### The Municipal Program

In the State of New York, outside of the limits of the Greater City of New York, there are 57 counties, 934 towns, 575 villages, and 62 cities, in addition to countless special improvement districts. Each of these subdivisions has its own independent government and taxing power and is, within certain limits, responsible for the construction, maintenance, and operation of public works facilities. Under the supervision of the New York State Postwar Planning law, each of these political subdivisions is entitled to apply to the Postwar Public Works Planning Commission for a subsidy, or grant, to assist in the preparation of plans and specifications for worthwhile public works construction.

The initiative rests with the political subdivision, although the Postwar Planning Commission does maintain a staff of skilled employees whose function it is to travel about the State and discuss this program with the local officials and to assist them in the preparation of their applications and to assemble certain data which may be required in the consideration of the applications.

There is no compulsion whatsoever on the part of the State which would require any municipality to submit, or to refrain from submitting, any type of application.

When received by the Postwar Commission these applications are referred to the Department of Public Works, and each application is then investigated by the Department of Public Works to ascertain its merits. The Superintendent of Public Works is presumed to certify to the Planning Commission that the proposed project is of a lasting and enduring character; that it is needed in the natural development of the community; that the estimated construction costs are reasonable; and that plans and specifications can be prepared with sufficient speed to make possible the advancement of construction at a reasonably early date. The application is further subjected to the scrutiny of the Comptroller of the State, who is presumed to determine that the local-

ity is financially able to proceed with the proposed construction if the application is approved.

The Division of Commerce is presumed to present information as to whether or not the project is located in an area in which unemployment may or may not be expected in the immediate postwar era.

With all of this information at hand, the applications are then submitted to the Postwar Planning Commission; individually studied; and allocated geographically in relation to the proposed distribution of funds available in the different areas of the state. After consideration the application is either approved, disapproved, or deferred.

It is interesting to note that all applications are reviewed in the light of the willingness and of the ability of the locality to finance the actual construction without any form of subsidy from either the State or the Federal government.

The State law provides that, with respect to approved projects, the State will share equally with the locality in the cost of the preparation of the plans and specifications up to a maximum joint participation in the amount of four per cent of the estimated construction cost. It is not necessary that this maximum allotment be made, and in many cases participation has been confined to a lower percentage; but four per cent is a recognized normal cost of the engineering or architectural services necessary in the design of these types of projects. In addition to the percentage allowance on these projects, where it is considered advisable or necessary, the State also participates with the locality in the cost of special investigations, such as test borings, soil analysis, or extended planning, as may be deemed advisable to insure the preparation of adequate and proper plans.

As of January 1, 1944, in the Municipal Program 3407 applications have been received, having an aggregate estimated construction cost of $327,817,918. In order to emphasize the enduring character of the works proposed, the following break-down of the types of projects involved is of considerable interest.

| | |
|---|---|
| Sewers and Sanitation projects | 662 |
| Water Supply projects | 217 |
| Road and Street improvements | 1,471 |
| Park improvements | 149 |
| Schools | 178 |
| Municipal buildings | 288 |
| Bridges | 192 |
| Miscellaneous | 250 |

All of the above applications have not been approved as of this date, but grants have been approved and authorized on 1,149 projects, having an aggregate estimated construction cost of $74,136,070; subdivided as follows:

| | |
|---|---|
| Sewers and Sanitation | 202 |
| Water Supply | 29 |
| Road and Street improvements | 652 |
| Parks | 38 |
| Schools | 38 |
| Municipal Buildings | 90 |
| Bridges | 73 |
| Miscellaneous | 27 |

On some of the applications originally received, it was found unnecessary to make a State grant for the preparation of plans and specifications for the reason that said plans and specifications already existed or were not required for the projects involved. There were 545 such projects, having an estimated construction value of $54,569,607, subdivided as follows:

| | |
|---|---|
| Sewers and Sanitation | 86 |
| Water Supply | 45 |
| Road and Street improvements | 193 |
| Parks | 38 |
| Schools | 17 |
| Municipal Buildings | 40 |
| Bridges | 35 |
| Miscellaneous | 91 |

As of January 1, 1944, there were 1713 projects in the process of investigation and approval, having an aggregate estimated construction value of $199,-112,241.

As of January 1, 1944, 378 local political subdivisions have made application to participate in this program.

In making these grants, and as a condition thereof, the Planning Commission insists that work on the preparation of plans and specifications be immediately progressed and a time limit be placed on the completion of that preparation. This is to insure that, at the earliest possible moment, there will be created a shelf of completed construction plans and specifications for worthwhile public improvements which can be advanced to construction at the earliest possible date.

Applications continue to be received daily, and it is impossible to forecast how many applications will be received in 1944, or as to what might be the estimated construction cost thereof. The procedure seems to meet with favor, and there is no indication as to slackening of interest in the program. It is

quite possible that 1944 will see a program equal at least to that under consideration at the present time.

In the preparation of plans and specifications, the local government is privileged to choose its own method as to such preparation. Plans may be advanced either under the direction and supervision of their duly constituted departments, or else they may be progressed through the employment of consulting engineering or architectural services. The locality is the sole judge as to this determination, and the State does not impose any restrictions or suggestions.

### The State Program

Any department of state government is privileged to submit to the Postwar Planning Commission an application for approval of the design of any construction project. In many cases no budget authority exists for the desired construction, but regardless of this restriction the Postwar Planning Commission may authorize the preparation of the required plans and allocate money therefor. In other cases, existing budget authority and legislative enactment either authorizes or directs the preparation of plans and specifications for certain projects, and in these cases the Postwar Planning Commission is authorized to exert general supervision and coordination to insure a well-rounded, orderly, and complete plan of postwar activity.

The Department of Correction has submitted requests for the preparation of plans for additions to prisons and for enlargement and expansion of their various correctional institutions. The Department of Health and the Department of Mental Hygiene have submitted applications for plans for new institutions, for the extension and remodeling of existing hospitals, and for the construction of many utility buildings needed in their operation. The Department of Education desires to expand its school facilities. The Division of Buildings requires alterations and additions to state office buildings. The Department of Conservation has many projects designed to preserve and improve the scenic beauty, and the natural resources of the State, and there are many requests from other departments for authority to make various types of improvements which will facilitate their operations. The various State Park Commissions have many projects in mind to extend and improve the system of parks and parkways throughout the state.

In most of the above cases no authority has existed through which the preparation of plans might be authorized, and the Postwar Planning law now makes it possible for all of these departments to obtain funds to advance these projects. Up to the present time a total of 110 such projects have been authorized, having an aggregate construction value of $20,736,424. This represents a very small percentage of the number of requests, as it has been found in many cases that before construction can be advanced some form of legislation is required. It is not intended to prepare plans and specifications for State projects unless absolute assurance exists that the plans may be progressed to actual construction. Nineteen forty-four may therefore be expected substantially to increase the extent of this particular phase of the program. The design of the bulk of these projects already authorized has been assigned to private consulting firms.

### The Highway Program

The highway program, consisting of the construction and reconstruction of highways on the State system; the extension of certain parkways; the design of the State Thruway; the elimination of railroad highway grade crossings; the reconstruction of outmoded highway railroad separation structures; and the construction of bridges, is almost entirely authorized by law and by budget appropriations; and is not dependent upon the Postwar Planning Commission for funds to progress the preparation of the necessary plans and specifications. These projects, however, are coordinated by the Planning Commission with postwar planning, and constitute a very positive part of the construction work which will be undertaken by the State as soon as possible.

In the consideration of this plan as a whole, it has been considered advisable to develop it on a broader scale than the immediate postwar years, and a five-year period has been selected for the completion of the program now under design. The aggregate estimated cost of this particular feature of the program is $779,740,000, of which highway and bridge construction and reconstruction amounts to $419,262,000; thruway construction, $197,800,000; parkway extensions, $93,220,000; highway railroad grade crossing eliminations, $50,973,000; reconstruction of existing highway railroad grade crossing eliminations, $18,485,000.

For practically the entire program contemplated in the first two years existing funds are available, as well as for a portion of the program contemplated in the remaining three years. But the absolute completion of the plan as at present designed can be as-

sured only by additional financing in the last three-year period. This particular feature of the program is being designed by the engineers in the employ of the Department of Public Works, and very little outside consulting service is being utilized. None of this program can be considered as construction being recommended for the purpose of alleviating any unemployment problems. It represents a backlog of accumulated deferred projects which probably would have been constructed by this time had not the depression and the war intervened.

The one exception to this particular statement may be found in the proposed thruway construction. This thruway originally authorized by the Legislature in 1942, provides for the construction of a highway extending from one end of the State of New York to the other—a total length of approximately 480 miles, and represents perhaps the most ambitious individual highway project ever conceived by any state. The engineers of the department are engaged in the surveys and designs and research necessary to make this the greatest highway in existence. It will be toll-free, an all-purpose highway, without a traffic light from one end to the other. It is proposed to provide three ample lanes of traffic in each direction, separated by a center mall of varying widths constructed on a right of way with a minimum width of 200 feet, utilizing as much of the waste land in the state as possible, by-passing all cities, but providing reasonable and quick access to every city along its route; with all highway and railroad intersections separated; with adequate interchanges; acceleration and deceleration lanes; the whole project designed for a speed of 70 miles per hour; maximum grades of 3 per cent and minimum radii of curvature of 2800 feet; with a minimum sight distance of 1000 feet. It is hoped that construction will start on this project immediately upon the cessation of the war, and the completed project is expected to be in operation within five years.

This entire program of highway improvement within the State of New York is designed to be financed by the state, with the exception that it is intended to take advantage of such Federal aid as may be expected if the present existing plan of Federal participation is continued. There is no contemplation of any special or increased Federal subsidies contemplated to make this plan possible.

In order to clear the last remaining obstacle from the pathway to an assured construction program the Governor has recommended, and there has been introduced in the Legislature, a bill providing for the acquisition by the State of rights of way necessary for the development of the State Highway system. This legislation is expected to be adopted at an early date.

With respect to the state program as a whole it is quite impossible at this time to make an exact statement as to the value of construction which might be placed under way during the first year after the war, but I believe it can be safely assumed that authority, finances, and plans will be available to progress at least $140,000,000 worth of construction, and it is believed that it will be possible to continue the preparation of plans at the same, or even a greater rate, for several succeeding years.

This summarizes the postwar plan as contemplated by the Postwar Planning law and as prepared to be advanced directly under the supervision of regular state departments. There are other projects, however, more or less identified with the State picture which must be recorded, and they are as follows:

### Housing

The Constitution of the State of New York provides for the creation of a State debt in the amount of $300,000,000 for low-rent housing. The Legislature has authorized the execution of housing contracts to the extent of half this amount, of which two-thirds is to be expended within the City of New York and one-third in the balance of the state.

At the present time plans are under way for contemplated housing construction to the amount of approximately $90,000,000 immediately after the war.

There is also pending at the present time legislation which will allocate to the Greater New York area for certain projects an additional sum of approximately $35,000,000 for immediate use in the postwar era, so that the approximate total of possible housing construction will be $125,000,000. All of this work is being progressed under the direction of the State Housing Commission.

### Local Programs

In addition to the construction programs heretofore outlined, in which the State either completely or partially participates, many local municipalities have prepared programs of their own entirely independent of any state cooperation. Notable amongst these is the Greater City of New York, which is planning approximately 500 separate projects, having an aggregate construction value of $700,000,000.

Reports indicate that very substantial progress has been made in the progress of these plans.

### Arterial Routes in Cities

Pursuant to Acts of Congress, certain Federal funds have been made available for the designing of arterial routes through cities in order that plans and specifications may be ready in case these routes may be incorporated in the general postwar construction program. These funds are required to be matched evenly by the states. In New York State these funds, including the State-matching money, amount to $4,941,318.

A program of arterial highway construction in Greater New York has been tentatively agreed upon with the officials of the city, having an aggregate estimated construction cost of approximately $32,000,000. Preparation of some of these plans has already started, but final agreement as to Federal approval has not as yet been secured. This particular program is in addition to any of the other programs referred to in this discussion. Funds for the actual construction of these routes are not yet available.

The State has also participated in the expenses incurred in the preparation of plans and the making of surveys for the construction of a vehicular tunnel under New York Bay between Staten Island and Brooklyn.

In addition, from other Federal funds ear-marked for the design of arterial routes, the State has allocated funds for the construction of the Brooklyn-Queens connecting highway at an estimated construction cost of $8,000,000. Funds for the actual construction of this route are not yet available.

### Authorities

There are in existence in the State of New York several authorities operating self-liquidating projects of various descriptions, to which, by law, the Postwar Planning Commission is permitted to advance funds for the purpose of design. Up to the present time, allocations have been made to the Niagara Frontier Authority for preliminary studies in connection with the construction of a tunnel or bridge in Buffalo at an estimated cost of approximately $5,000,000; and to the Jones Beach Parkway Authority for preliminary plans for the construction of the Captree Parkway and Bridge between the Southern State Parkway and Ocean Boulevard at an estimated construction cost of approximately $5,000,000. No arrangements are yet made for the preparation of final plans, nor for the construction of these projects.

It is understood that all moneys advanced by the Planning Commission to authorities for these purposes must be returned from the revenues derived from the operation of the projects.

### Flood Control

The United States Army Corps of Engineers, in its development of a postwar construction program for flood-control purposes, has designated several projects in New York State as being ready for progression. In order to insure the prosecution of this work, the State of New York has approved all projects, and an appropriation is now pending before the State Legislature in the amount of $988,000, which represents the share which the State will be required to pay on these projects. The total estimated cost of this program is $5,388,613, which estimate has been prepared by the U. S. Army Corps of Engineers.

### Summary

From the above brief outline of procedure in the State of New York, it can be seen that the State has taken advantage of every possible opportunity to resume construction of public works at the earliest possible moment. In planning its program the policy has been to insure the selection of useful, worthwhile, and enduring projects, to the end that the resources of the State as they may be defined today in dollars will be converted into other resources of the State as they may endure tomorrow in steel, stone, concrete, and other permanent materials. The program is not a "make-work" program. While it may be considered ambitious, it is designed to restore the gap left by the deficiency of construction during the recent years and to afford to the people of the state those facilities which are required for their health, safety, and general welfare. In this process the State also will provide a vehicle by means of which jobs will be insured for many thousands of those presently engaged in the conduct of the war.

# Application of the Walsh-Healey and Wage-Hour Acts to the Crushed Stone Industry[1]

**By L. METCALFE WALLING**

**Administrator, Wage and Hour and Public Contracts Divisions, U. S. Department of Labor, New York City**

FIRST, let me thank you, Mr. Chairman, and the Resolutions Committee, as well as the Convention, for that very fine tribute which you paid to me, which is undeserved but which is therefore all the more appreciated. May I say in return that it has been one of the most pleasant parts of my job in dealing with the whole gamut of American industry to work with the Crushed Stone Association and all the members of your industry. I mean that quite sincerely, and I feel that I can always deal openhandedly, with perfect frankness with you, knowing that in return you, I believe, also will appreciate that kind of treatment from me, and I think that the success which you apparently feel, and which is certainly very deep-seated on my part in our relationship, stems from that feeling that we can deal frankly and openly and in perfect confidence with each other.

It has been a pleasure for me now for over seven years to work with Mr. Boyd and the changing members and officers of your Association, and we have always conducted our relationship on that basis. It has now become one almost of intimacy, and I appreciate very much the opportunity of working with you, and I want you all to know how much I value your friendship and the words of tribute that you have paid me this morning.

Not everybody feels that way, however. Sometimes I get some letters from people who don't quite see it that way, and it just keeps us on our balance, you know, and prevents us from getting a swelled head or anything of that sort and I thought you might like to know how some people feel about me. This is a letter I received a while ago, which starts off this way:

"Dear Sir:

"You and Mussolini!

"I wonder where, when and how you fellows in Washington got so filled with egotism that you believe you have even more wisdom than God.

"You think you are the only people who know what we should plant and how much of it, what we should make and how much, how long we should work, and at what price. There is only one thing lacking to complete the absurdity of the whole situation, and that is legislation to regulate the number of kernels that shall be grown on an ear of corn.

"God in all of his wisdom has not seen fit to do this, but I am sure you can undertake the job, and do it well if you only set your minds to it.

"Joshua, Mohammed, and the couriers of old King Canute were imitations in comparison with the present Washington group.

"The activities of all you public pap eaters simply add to the expense of government and to the cost of doing business. These activities all lead to greater prices and a greater reduction of purchasing power. All of your efforts to get us out of your mess result simply in digging deeper graves and pushing us further underground. Hell is really too good for you.

"Very truly yours,"

Well, you see why I appreciate your kind words.

I was very much interested at the banquet last night in the fact that your first convention was held twenty-seven years ago in New York State, in Buffalo, and that for some strange reason you haven't met here since, until this convention, which very appropriately is being held in New York City. I expressed surprise at the large attendance, and then I realized perhaps part of the reason was that there are certain attractions in New York City which not every other place in the country offers and that may have had something to do with your willingness to forego your usual comfort and embark on the perils and inconveniences of travel in these wartime days.

[1] Presented at the Twenty-Seventh Annual Convention of the National Crushed Stone Association, Hotel New Yorker, New York City, January 31-February 2, 1944.

In any event, I am very glad you are here and very glad you have chosen New York City for your meeting.

I was also very much pleased to see that the safety interest which has always characterized this Association now for many years is being retained, and I want to congratulate you for having given that such a conspicuous place on your dinner program, which was by and large not devoted to business affairs. It emphasized in the minds of the members of your industry, I am sure, the importance which you all attach to this matter. We are becoming more and more conscious, of course, of the necessity for cutting down industrial accidents and death. When we realize that there were more people by seventy-five hundred who have been killed in industry since Pearl Harbor than have been killed in armed conflict, not thinking of it at all for the moment from the human standpoint but just realizing what a loss to productive manpower that is, it makes us realize what a significant contribution your Association is making toward trying to encourage its members to do something to change the balance of these figures.

I offer you my hearty congratulations for your efforts, in which I am particularly interested because of my responsibility to try to do what we can in a feeble way to be sure that the performance of government contracts, at least, during the wartime period is carried on under the safest and most healthy working conditions. We have made relatively little progress, unfortunately, in this direction. On the other hand, when we compare the size of the working force today with what it was back in December 1941, when we fully appreciate the fact that millions of raw, untrained workers, men and women and children, and incidentally, very largely women and children, have been added to the working force, we realize that we have not done so badly after all. While there are no grounds for complacency, we do have to balance these all too high totals against the total amount of employment, the millions of new people who have been added to the labor force, and the stress and strain of getting out production in time to do some good, which has characterized our whole production effort.

I don't know how generally it is realized that more than a million children who would not normally be employed in industry except for the war effort are now gainfully employed. We had, back in July, about five million minors employed in American industry. As a matter of fact, the popular assumption that we have solved our labor supply problem by the use of housewives and women who are not normally employed, and who are over thirty-five years of age, is not the whole story. The number of children who have been employed in industry since the war is just about the same as the number of these women who have been brought into the labor market for the first time, and in a very real sense of the word, we are fighting this productive war with our children.

Two out of every five children between the ages of sixteen and eighteen in this country are gainfully employed, and one out of every eight children of the age of fourteen or fifteen is gainfully employed in this present productive effort that we are going through. I haven't time to dilate on the consequences to future citizenship, future education, and in many cases maimed lives, that those figures mean. We have all been so busy with the business of getting on with the winning of the war that we haven't always had time to stop and think about some of these implications of what we are going through. In my opinion they are very serious, and something which we could not indefinitely tolerate as a means of solving our labor supply problem.

Of course, many of these children who have been lured by the high wages of industry are leaving the schools in the thousands; even in crowded areas there is space in school houses because of the refusal of children to attend and the failure of their parents to see that they do attend school.

The increase in the illegal employment of children has gone up tremendously—one hundred and fifty-nine per cent over 1941 by number of minors, and by the number of establishments that have been in violation of the wage and hour standards, for instance, the increase has been over two hundred per cent. Those are very alarming figures which I want merely to present to you without any further comment.

Last week I had the pleasure of talking to the annual convention of the National Sand and Gravel and Ready Mixed Concrete Associations, and I want to say to you some of the things that I tried to bring home to them, because in many ways your problems are very similar.

Your Association and the Wage and Hour and Public Contracts Divisions have been in continuous enough contact over the years, I think you will agree, so that we can qualify as old friends and talk to each other that way.

A good deal of water has flowed under the bridge since I had the pleasure of speaking to your convention in St. Louis four years ago. A great deal of

water—and a great deal of blood—has flowed under the bridge. At that time, when I spoke to you as Administrator of the Public Contracts Act alone, there had been awarded, in about three years prior to that time, from the date that that Act became effective, a paltry twenty thousand contracts valued at about one billion six hundred million dollars. In the last year alone, we had one hundred and one thousand contracts valued at thirty-one billions. Compare that figure for one year with the first three years. But it is chiefly of the Wage and Hour Act that I want to talk to you today. Just three years ago, General Fleming, as Wage and Hour Administrator, addressed the Sand and Gravel Association, defending the seasonal exemption that had been granted to the northern branch of their industry and yourself. He pointed out, using as text a quotation from the *Wall Street Journal* and another from a Florida paper, that the exemption did not discriminate against any section, but had been determined factually on a basis of climate and actual seasonality of operations, and really righted a discrimination imposed by nature.

You will remember that soon after the Act became effective, the National Crushed Stone Association and the National Sand and Gravel Association had filed applications with the Administrator asking for a seasonal exemption under Section 7 (b) (3) of the Act. A hearing was held in June 1939, and it was found that plants in the crushed stone and sand and gravel industries in the northern areas of the United States, where the winters are comparatively cold—I don't suppose I need to underline that this morning—were compelled to cease about six months each year.

Such plants found it necessary to operate long hours each week during the warm season in order to excavate as much as possible before the ground became frozen. In the southern areas, however, where warmer climates prevailed, operations extended over a longer period of time and such necessity for working long periods of overtime did not exist.

For purposes of exemption, therefore, the industries were divided into northern and southern branches. Exemptions from the overtime provision, permitting employees to work up to fifty-six hours a week and twelve hours a day for a period of fourteen weeks a year, were granted to the northern branches, where overtime constituted a real problem.

Provision was also made for extending the same exemption to other plants regardless of location, if local climatic conditions compelled them to operate in the same manner as the plants in the northern regions.

Subsequently, the exemption has been extended to other companies through sixteen separate supplementary determinations, twelve in the crushed stone industry and four in the sand and gravel industry.

I hope you will agree that in this whole matter, the Divisions have acted fairly and in the best interests of the industry as a whole within the Fair Labor Standards Act. No one would feel the need to come before you now and defend that exemption, as General Fleming felt it necessary to do. That is exactly why I have been at some length to tell you the circumstances under which it was issued, because I want you to have faith that in some other matters in which we may not have seen eye to eye, or we may not in the future, that things may still work out to a point where you will also come to agree with the wisdom of the underlying philosophy of the Wage and Hour Act under which we function.

It is just about a month ago that you started working, those of you who were not already doing so, under the forty cents minimum wage order. Let's see what has developed in this month. How many quarries have closed down, and how much unemployment has been caused? These are relevant considerations, since curtailed employment opportunities are the criteria set up by the law for Industry Committee consideration, and also for the Administrator in approving those Committee reports. I want to face squarely with you the implication in these times of supposedly high wages, the implication of the almost solid vote, seven out of eight, of the employer members of the Stone, Clay and Glass Committee, including the representatives of crushed stone, against the forty cents minimum, against a wage of sixteen dollars a week for a family man who works the basic forty hours.

I confess that since the meeting of that Industry Committee, whenever I have seen stories and editorials in the newspapers, as you too have seen them by the score, assuming or stating that all labor is now high paid, I have looked at the papers later expecting that some of you might have written letters to the editors setting them straight, telling them that their assumption was wrong, that large segments of labor are still not yet quite in the high brackets they assume.

In my opinion, it would be a real public service, as well as smart public relations, and certainly no skin off your elbows, if businessmen like yourselves, and business associations, would step forward to

straighten out public thinking on some of these matters where you know the facts intimately, rather than leaving it entirely to labor and public officials to carry the ball on the side of truth you know.

Now, there is no question but that in many sections of the country low wages are still being paid. I wonder how many of you realize, for instance, what the difference is between the war industries and the non-war industries. These figures I am quoting are as of June, 1943. I doubt there has been any significant change since then. Ten per cent of the manufacturing employees in the country, war and non-war industries, were receiving less than fifty cents an hour, and over half of those men and women receiving less than fifty cents an hour were employed in four industries which in turn employed a fifth of the total manufacturing employment of the country, and they received less than sixty cents an hour.

The difference between the war industry rates and the non-war industry rates are rather striking. In war industries only four per cent of the workers are getting less than fifty cents an hour, and forty-one per cent are receiving a dollar or more an hour. In the non-war industries, however, over four times as many workers are getting less than fifty cents an hour, seventeen per cent, and only fifteen per cent are receiving one dollar or more an hour.

Those figures are very interesting and doubtless they were the figures that your representative and representatives of other employers on this recent Industry Committee had in mind when they voted against the forty cent recommendation.

What I do want you to realize, however, is that this Committee vote is really unusual. The economic situation has been such that all the Industry Committee recommendations, of which we have had sixty-nine since 1938, have been in favor of raising the minima. Although it is entirely optional with the Committee what their recommendation shall be, out of one hundred and thirteen Committee recommendations—that includes some reconventions of Committees for the purpose of reconsidering the rate between thirty and forty cents because some Committees have met two or three times—even going back to those low-wage depression years, over half were reached by unanimous vote of employer, employee and public representatives. In eighty-three per cent of the cases a majority of the employer representatives voted for the recommended rate, and in two per cent more they split evenly.

Whatever else you may think of us, I doubt, in view of your representation on this Committee, and in view of the actual vote, that any of you would accuse us of packing the Committees with employers who are overly favorable to wage increases. We have tried to pick them fairly, to have them representative, and we have picked them from nominations by associations, as in your case, except in a few very rare instances where these would not cooperate.

What does this high record of employer backing for the minimum wage recommendations mean? As I see it, it means simply that the great part of employers and trade associations have come to agree with the philosophy underlying the Act, the philosophy of the representatives of the people in Congress who made the Wage and Hour Law the law of the land. Remember that the Act aimed at greater prosperity for the whole country, capital and management and labor, including white-collar, and not just for labor alone.

In preparation for meeting you here, I was running over the minutes of your Industry Committee, and I came across a brief passage so striking that I want to give it to you. I have never seen a better brief statement of the basic facts behind the philosophy of the Wage and Hour Act. I certainly have never been able to put it so persuasively myself. Yet this statement was made by one of your representatives of the crushed stone employers in arguing against the forty cents minimum, believe it or not, and here is what he said:

"The price of crushed stone, like that of many other commodities, is largely set by the general economic situation of the locality in which it is used. If the area is wealthy and prosperous and the basis of income of that area is the basis that brings in prosperity and a good deal of money, then the price of crushed stone in that area has a tendency to rise. If the economic basis of an area is not prosperous or on a higher scale generally, then the crushed stone business has to adjust itself to that fact."

Could a better illustration be found of the wisdom in providing a gradual increase of the minimum wage from twenty-five cents an hour up to the forty cent level? Could a better statement be made of the general increase in prosperity that came to community after community as starvation wages were no longer paid, that came, not only or primarily to the worker, but to the merchants, the banks, the builders of homes, industry, communities as a whole?

It was Henry Ford and other far-sighted industrialists, not bearded professors, who popularized the idea that prosperity could not be healthy unless industry

could sell to its own people. How many homes are built by families whose breadwinner makes twelve dollars a week?

By his own account, what price could our crushed stone representative expect to get for his product in a community whose level he was perpetuating by paying family men so much less than sixteen dollars a week?

Now your industry, and all of the construction industry is going to have a postwar boom. You all know that. The plans of private industry, pent-up demands for new homes, all the plans of government—local, state and Federal—all point the same way. Since the last war, you have been through the most violent swings—high boom, followed by deep depression, and everything in between, and you have not had tops in a war boom now, to put it mildly.

After this war when this next boom comes, don't you want it to last? It won't be more than a first false breath of spring in February if in the days of demobilization, wages are slashed down to rock bottom so people and communities cannot buy your product. The Wage and Hour Act prevents the other fellow in other interstate industry from pulling the plug out and sinking the boom with all of us—at least not below the forty cent minimum, which, I am sure you will all agree out of your own experience, does not provide in these days actually a decent minimum living standard.

What is more, if you are wise, you and other industries in the boom to come will scale your wages voluntarily and without government pressure, so your product, housing and construction, is within your own workers' means. That is not, as is often said, trying to get something for nothing in our economy. On the contrary, the man who tries to get something for nothing is the businessman who insists on trying to sell a mass product that few people can afford to buy. When the boom comes, do you want it to last? A good part of the answer lies in your own hands.

Now, I want to tell you a little bit about what we have been doing since Pearl Harbor, how the Wage and Hour and Public Contracts Divisions have gone to war. Like every other patriotic American, the morning following the seventh of December we opened our desks and took stock of our situation. What can we in our particular activity in the government, and what can we as individuals, do which will make the greatest contribution to the war effort?

It seemed to me that one of the first things we ought to do was to simplify the rules of the game for industry in so far as it lay within our power, to cut as much red tape as it is humanly possible to cut in the government, to eliminate as much duplication of activity, to conserve manpower wherever we could, to consolidate the administration of the Wage and Hour Law and the Public Contracts Act, both of which now have a very large effect on American industry, as was illustrated by those hundred thousand contracts that I referred to; and so we did those things. We combined the administration of both these Acts in one single Administrator whom you are unfortunate enough to have before you this morning, and a conscious policy which we have been trying to follow is to have uniform rules and interpretations under those two Acts wherever we can.

There are certain statutory differences about which we can do nothing, in the absence of Congressional legislation, but we have cut all the corners that we can in bringing into harmony conflicting rulings which had grown up under these two Acts, rulings which frequently had no necessary legal basis, which were not required to be as they were because of the language of the Acts themselves.

Let me give you two or three illustrations of what I mean. Some of you may have come across this inconsistency. If you were working under the Public Contracts Act, you were permitted to pay overtime on the basis of the actual rate of pay at which your man was employed beyond forty hours, let's say. You couldn't do this, however, under the Wage and Hour Law, under the then interpretation. You had to average his earnings by dividing the number of hours he worked into the total pay he received and getting a theoretical rate which had nothing to do with his actual rate.

Well, we decided that the simplest thing to do there, since those were not inevitable necessary legal constructions of the Act, was to say, "We will accept whichever system you are using," and I had a sample test made to bear out my own hunch, which was to the effect that there wasn't very much difference, and we found out over a large number of cases that it amounted to a few cents a week. So we did that.

We have also adopted uniform rules in connection with the payment of piece rates under both Acts, which were different and which caused a great deal of confusion and unnecessary bookkeeping and expense in many industries.

We then moved to use our manpower in the most effective way possible to get the greatest result, and also to have the minimum of interference and annoy-

ance of busy executives in industry, by providing that the same inspector would make one inspection of the establishment for compliance with both Acts, instead of having a small army of government men following each other into your shops. I know that that is something which all of you have appreciated.

It has been interesting to me, however, to find out how difficult it sometimes is to sell that idea to businessmen when they come into the government. I, in my naiveté, thought that the officials of the War Production Board, for instance, would see right away the desirability of extending this method of inspection to the work we are doing for them. Not at all. They thought it was very serious to mix up a visit which we were making for the purpose of checking inventories under the PRP of the War Production Board at the same time that we made these other inspections, and I finally (this is a little incredible) had to talk to Donald Nelson, himself, before I got them to see that we were going to eliminate a great deal of annoyance to business by consolidating these visits into one, as well as to save the government time and travel and money all the way around. We finally have done that on our War Production Board program, and we have also done it on our War Labor Board program, so that now one of our men has to be practically a jack-of-all-trades, because he is coming into your establishment conceivably under the Public Contracts Act, under the Wage and Hour Act, under one or more of the War Production Board programs, and under the War Labor Board program.

But, at least, even though he may stay a longer time than you would like to have him, he cleans up the whole thing and you don't have four or five men coming in and bothering you at different times.

We did take one step in connection with the use of children on government contracts which involved action by us administratively in the absence of Congressional action. For several years I have tried to persuade Congress that it was a sensible thing to amend the Public Contracts Act to permit the employment of sixteen and seventeen-year-old girls under proper conditions of safety, realizing that there were certain occupations which perhaps they should not be allowed to enter at that age. But I have been a voice crying in the wilderness and I have gotten nowhere on it, so that I have to accept a Congressional policy which still, in these days of wartime, is to the effect that we must not utilize sixteen and seventeen-year-old girls on government contract work.

The pressure, of course, became so great and the absurdity of the situation so conspicuous, that we finally decided that despite the expression of Congressional policy, we would have to open up the field to these young girls under certain conditions. I say that to you to indicate why we have surrounded, with these safeguards, this exemption which we have given to permit all sixteen and seventeen-year-old girls to be employed on government work. Remember that in industries, such as the airplane industry, the whole expansion in production has very largely come as the result of the use of women in industry for the first time in considerable numbers. We had to recognize that there was a strong Congressional policy against the use of women at all, as far as the actual provisions of the Act were concerned.

I may some time be called before a Congressional committee for maladministration of my office by not following out the Congressional mandate, but I still think it was a sensible thing to do, and that we have made a real contribution to the manpower situation by allowing these sixteen and seventeen-year-old girls to come into the kind of jobs which they can appropriately and safely do, and I have no hesitation in saying that many hundreds of thousands of workers, perhaps more than that, have been added to the labor force, who would not otherwise be available if we had not taken this action by way of administrative exemption under the Public Contracts Act.

I referred earlier to work that we were doing for the War Production Board. We apparently have come to be regarded in the Federal Government as the Federal inspection service which carries on relations with industry on the factory level, because we have been brought into all of these war programs in that capacity, and because of the special wartime job which we have been doing since January 1942, we have actually taken on more work and more personnel, and have a larger budget for these special jobs, than we had for our combined activities in the administration of these two laws previous to that time.

We made, for instance, in the early days of the post Pearl Harbor program, the inspections under which the whole tire rationing program was set up. We made in ten days thirty-seven thousand visits to retail tire establishments all over the country. We mobilized in ten days our entire force, scattered throughout the United States, to do that job. I think it is not too much to say that there was no other agency of the government which happened to have the manpower available and strategically located in the industrial centers to do that kind of a

job on two days' notice and complete it within ten days. We are proud of that. We gathered the essential information which was needed by the OPA to embark upon the whole rubber program of tire conservation.

We did special surveys of silk, copper, steel, and various other industries on which programs and policies which affected the distribution and the allocation of raw materials necessary in the war effort were based.

During the first year of the PRP of the War Production Board, which I suppose does not affect members of this industry particularly, we made twenty-eight thousand inspections and reports to the War Production Board on that program alone, in addition to our regular program. That was substituted in July with the Controlled Materials Plan, under which the strategic and short raw materials which are needed in industry are allocated so that they get to the right manufacturer at the right time, and in the right amounts, and the man who is doing an important job has what he needs, and the man across the street who may happen to have an excess of something that his neighbor needs does not have that excess lying idle.

We have been carrying on this program, integrating it as far as we could with our regular activities in furtherance of this general policy of avoiding duplication of factory visits and inspections.

When the Economic Stabilization Program suddenly hit us back in October and November 1942, the War Labor Board turned to us to help them out. They were given very quickly a tremendous administrative job to do. That is, in addition to their program of settling wartime disputes, to sit on the lid for wage increases, and to approve or disapprove any wage change that any employer in the United States with more than eight people by and large, with some minor exceptions, wanted to make, and some of you may be able to suspect how quickly once you said you couldn't make any wage changes, everybody found out that was the first thing they wanted to do. So we became overnight a wage retarding agency instead of a wage raising agency, but we are ambidextrous and we take those things in our stride, and we called a conference of our thirteen regional directors in Washington on one day's notice to meet with the War Labor Board to lay out the program. The War Labor Board at that time had no offices outside Washington. It had a very small personnel which had been working solely on disputes, and this program was to go into effect within a very few days. Our people came in for a one-day conference with the officials of the Board on a Friday, they went home Friday night, got back to their offices Monday morning and opened up shop to receive applications for wage increases before we had any forms to use, before we had received any detailed instructions, and before anybody, including the War Labor Board itself, knew very much about what that program was going to be. We were flooded with thousands of inquiries and definite applications to make wage changes that very first week.

We survived the flood and we have carried on since that time, handling a tremendous volume of applications. We are still getting twenty-five thousand inquiries a week in our offices about what you can and cannot do under the Wage Stabilization Program.

We have handled one hundred and fifty thousand of these No. 10 forms, which I am afraid are all too familiar to some of you, under which you apply for approval of a wage increase that you want to make.

We are getting now thirty-two hundred formal applications a week, for a wage increase which have to be acted upon one way or another and forwarded by us to the War Labor Board when they have been properly filled out.

We are rather proud of the fact that we have in our offices only a backlog of thirteen hundred No. 10 forms, which represents not more than two or three days' work for us. I say that to you to indicate how important it has been to industry and labor in this period that they have been able to process these applications so quickly. The War Labor Board, of course, has the authority to decide whether the increase which you want to institute is inflationary or not, and we merely assist you in filling out the necessary papers to state your case for action by the Board. It is inevitable that it will take time. It will take more time for the Board to act on those than it does for us to act on them when they come to our office, or to advise you on one of the No. 1 forms whether the increase which you propose to make is one which comes within the Wage Stabilization Program, or without.

You might be surprised to know that seventy-five per cent of the volume of paper work that comes in, applications and inquiries and so on, is handled directly in our office and never gets to the War Labor Board. We syphon off seventy-five per cent of the program before it ever reaches them. I say that to you to indicate what a terrific clogging there would be of the works in the War Labor Board if they had

to add seventy-five per cent to the load which they are now carrying.

Recently the War Manpower Commission has requested us to make an experiment with them on the West Coast to see how the orders which they have issued with special reference to the congested areas on the West Coast are being carried out, and whether or not they are contributing to a solution of the manpower problem which I suppose is as serious on the West Coast as in any other part of the country. That experiment, in the opinion of the War Manpower Commission, was successful, and we have now extended it until the first of July, probably to be renewed then, in the five major West Coast cities; San Diego, Los Angeles, San Francisco, Portland, and Seattle.

Briefly, we are investigating to see whether everybody is working at least forty-eight hours a week, for instance, whether manpower is being fully utilized, whether certificates of availability are being observed, whether employees are leaving their jobs which are essential without such a certificate merely because they have a better paying job across the street, and so on.

These are some of the war activities which we have added in addition to our regular responsibilities. It is rather surprising to me that the ratio of violation of the Wage and Hour Act has continued so high in this period of high wages. But sixteen and a half million dollars last year were paid out as a result of our inspections of employees who were underpaid in wages owing to them. About half of the establishments inspected were in violation of either minimum wage or overtime provisions, and a third of the establishments were in violation of the minimum wage provisions, that is, were paying either less than thirty cents or less than forty cents an hour. Those figures illustrate why the total restitution figure is so large.

We have had a tremendous burst of minimum wage activity under the Industry Committee program in this last year. Out of the twenty-one million workers over whom we have jurisdiction under the Fair Labor Standards Act, we have covered ten million in wage orders in this year. Of those ten million, however, only three hundred and seventy-one thousand were regularly receiving less than forty cents an hour.

I have talked longer than I should, and I have perhaps given you too many figures, but these are serious times. We don't have the same mood of levity that we normally have at gatherings of this sort. I did want you to know what we were trying to do and what our basic philosophy was in the administrative responsibilities charged to us during these critical times for our country.

I can only say to you this: That if we have failed in these objectives of simply figuring the rules of the game, making it as easy as we can for you under the existing law and regulations, of avoiding taking so much of your time as busy, important men in worrying about whether you are complying with some kind of red tape regulation—if we have failed in those objectives, it hasn't been out of want of trying. It has been because we are human, because we are dealing with human beings, we have got three thousand people in our offices scattered over the country who are of varying capacities. We have had a terrific turnover in our force. We have many people who have recently come to work for us and aren't as familiar as they ought to be with the job they are doing. We have the same problem of labor turnover that faces everyone of you as employers.

I say that to you not as an excuse but in explanation of any offenses or sins we may have unintentionally committed. I do want you to know what our policy is, that we are trying as hard as we can to carry it out, and if we can remove some of the obstacles which have been taking your time and holding you back from doing the job that you and all of us are trying to do to get out this necessary production to win the war—if we have been able to help in that way in any small particular, we will not feel unrewarded. I want to pledge to you our continued energy and concentration in that job in the year to come, and I want you to know that I expect you to be as frank with me in criticizing us and telling us of our shortcomings as I have always been with you.

Thank you very much for your cordial reception.

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## Bureau of Mines Issues Two Interesting Circulars

TWO information circulars recently issued by the United States Bureau of Mines should prove of real interest to crushed stone producers. These circulars are entitled: "Accidents Due to Misuse of Explosives" and "Damage from Air Blast." They can be obtained from the Bureau upon request.

# Developments in Railroad Roadbed Construction[1]

**By G. M. MAGEE**

**Research Engineer,**
**American Railway Engineering Assn.,**
**Chicago, Ill.**

THIS is the first meeting of your Association that I have attended. I am, therefore, especially pleased to have this opportunity to be with you, get acquainted, and familiarize myself with your viewpoints in supplying the railways with one of the most important of their required materials. I have asked myself what phase of railroading I could bring to you which you would find most interesting. Today all of us are exerting every effort to meet the demands which wartime has brought. In the railroad industry we have been hard pressed to handle the large increase in traffic with the shortage of men and materials that has existed. I feel certain that your industry has been faced with a similar problem. It has seemed to me you would perhaps be most interested in developments that have taken place during the past several years and are taking place today on the railroads, which have made it possible to move the large volume of traffic now being handled. With the urgent demands of the present leaving little opportunity for constructive thinking and planning for the postwar period, perhaps you would also be interested in hearing the personal viewpoint of one individual on what changes in railroad track and roadbed construction can be anticipated in the post-war period.

During the years of the depression the intense competition between various types of carriers for the volume of available business resulted in noteworthy increases in the speeds at which passenger and freight trains were operated, and this was particularly true of passenger trains. Those days gave railways, generally, valuable experience in what they could do in the way of increasing train speeds. This period brought a realization of the possibilities and limitations with regard to increase in operating speeds. Then came the war period with a great increase in volume of traffic. In 1932 I think a great many people believed that the railroads would be relegated forever to the horse and buggy stage of transportation. Today I believe few of the public realize the railways are handling almost three times the number of passenger-miles and over 60 percent more gross ton-miles of freight traffic than were handled in the "Boom" year of 1929. Only those who are directly engaged in railway transportation really comprehend just what an increase in traffic volume of that amount means. All of this great increase in passenger and freight traffic has had to be handled with a substantially smaller number of locomotives and cars than were available for the heavy traffic period previously referred to. Some reductions in train speeds have had to be made, and there have been some delays in freight movements, but generally speaking, I think it is agreed that the railroads have done a remarkably good job in handling war time traffic. We have had, therefore, in the past 10 years, an experience on the one hand of greatly increasing our train speeds and on the other hand of handling by far the largest volume of traffic that has ever been moved in the history of the American railroads.

What has been the relation of roadbed and track to the outstanding characteristics of the traffic during these two periods? The experience of individual railways with high speed passenger trains has shown that the same general type of track construction is well adapted to the requirements of high-speed service. Reduction of sharp curvature is one essential for high speed. The maximum degree of curvature which will permit train speeds of 100 m.p.h. is 1 degree and 30 minutes. It is, therefore, essential that on those lines where very high speeds are to be maintained, the rate of curvature shall not exceed this amount. There are many miles of track in the United States on which the rate of curvature is considerably over two degrees. Grades are also a serious hindrance to high speed operation; not the short, undulating grades, but the long, relatively uniform grades that are encountered in the long approaches to the crossings of mountain ranges. In most cases it will not be practical to meet this situation by grade

[1] Presented at the Twenty-Seventh Annual Convention, National Crushed Stone Assn., Hotel New Yorker, New York City, January 31-February 2, 1944.

reduction, and the only solutions offered are an increase in the tractive power of the locomotive and a reduction of the dead or unproductive weight of the train by use of lightweight design and steels. Reductions of the deadweight of train is also a very important factor in making it possible to propel the trains at a high rate of speed even on level track, because as the speed increases the tractive power of the locomotive is reduced and the rolling resistance of the train is considerably increased. The grade crossing problem deserves increasing attention with high speed operation. Construction of grade separations afford public improvement which might well be extensively undertaken by the various governments —local, state and federal—in the post war period.

In general, therefore, we may say that the experience of the railroads in inaugurating high speed streamlined trains has definitely shown that the present type of track structure, with somewhat more careful attention to maintenance and reduction in curvature as required, will provide a roadway well adapted for speeds of 110 to 120 miles per hour.

Next comes the experience of handling the war time volume of traffic. During this war period the railways have been unable to purchase as much new rail or to place as many crossties in renewals as was considered needed. It is fortunate that in many cases it was possible to improve the track structure to meet present demands, by the application of additional ballast which was available when rail and ties were not. Today maintenance labor is a matter of equal and perhaps of more concern than maintenance materials. Were it not for the improvements that have been made in the track structure and roadbed during the past twenty years, with heavier rail, larger tie plates, treated ties, additional ballast and roadbed drainage, the railways could not have been maintained today with the number of men and amount of material that has been available. The service rendered by the tracks under the heavy volume of traffic that is being handled today has demonstrated that the prevailing type of construction is adequate. However, experience has pointed to improvements that can and should be made to increase the life of materials and reduce the requirements for maintenance labor. Research investigations are being carried on with a view of improving the metallurgy and design of rail. Continuous welded rail has seen several years service with satisfactory results, but extension of the use of continuous welded rail in the future is largely a matter of relative economy. With the improved methods of treatment of wood crossties, mechanical wear or abrasion of the tie by the tie plate rather than decay has become the determinant of the life of ties.

Generally, a treated hardwood tie gives an average life in track on American railroads of 20 to 30 years. In Germany, England and France a life of 35 to 40 years is the general average. This longer life of ties realized abroad is obtained by using separate fastenings of the tie plate to the tie to remove the abrasive movement between the two. However, these additional fastenings are expensive and require additional labor to keep them tight. We must, therefore, strike a balance between the benefits gained by lengthening the life of the tie and the costs of providing those means for accomplishing these benefits.

The matter of a substitute for the conventional crosstie has received very wide attention. The A.A.R. Committee on Ties has studied and reported on nearly 100 different designs of substitute crossties which have been tried out in actual service installations. So far, no substitute tie has been developed, to my knowledge, which compares favorably with a treated wood crosstie in all respects. The treated wood tie has certain inherent characteristics which well meet the demands put upon it in track. It is relatively inexpensive, light enough for ready handling, has a long life when treated, is a natural insulator for block signal circuits, and possesses resiliency and impact absorbing qualities. I do not mean to imply that we should cease to search for substitute ties, but I will predict that the treated wood crosstie will have the edge on its competitors for some period in the future.

Ballast is a very important item in the track structure. To me it is a matter of considerable interest that so many different types of ballast are successfully used on various railways. This is, of course, largely due to availability of supply. Ballasting of track has been a continuing process of additions and improvements since the first railroad tracks were built. Generally speaking today, light and moderate traffic lines are ballasted with some material which has been found satisfactory for the purpose and which is readily available in sufficient quantity. These types of ballast include oyster shell, cinders, sand, gravel, tailings, slag, etc. The heavier traffic lines are generally ballasted with crushed stone. Where the types of ballast of lower first cost are used it is the usual procedure, when the ballast becomes foul, to merely raise the track and apply additional ballast. On tracks where the more expensive crushed stone is used, and particularly in localities

where the voids become rather quickly filled with dirt, cinders, etc., it is the practice to clean the crushed rock with ballast-cleaning machines.

I would say today there are two important questions which require consideration with regard to crushed stone ballast: first, the extent to which the crushed stone will become pulverized in tamping or in the abrasion accompanying train movement; second, the extent to which it will become foul from dirt carried onto the track by the wind or from cinders or coal slack from passing trains. Recently one railway collected a sample of crushed stone ballast that had been in track for several years and had it analyzed in the laboratory. It was found that the fine material which had come to fill in the voids around the crushed stone consisted of 41 percent limestone dust, 45 percent soil, and 11 per cent coal dust. This particular ballast was a crushed limestone which was somewhat soft. For railroad use a crushed stone which is very hard, such as a traprock, may be considered most desirable, but I imagine it is considerable of a headache to those of you who have the job of crushing it.

Last year we had occasion to cooperate with the Illinois Central Railway, the Asphalt Institute, the Texas Company, and the Lehigh Stone Co., in an experiment with crushed rock ballast which was aimed at this matter of keeping the ballast from becoming foul and at the same time providing surface drainage of water and stabilizing the track. In this experiment a section of track one-half mile in length was first tamped up on the railroad's regular crushed limestone ballast, and the ballast section was dressed to the desired shape. Hot asphalt was then sprayed on this ballast and by its penetration into the voids a waterproof covering approximately 3 inches in thickness was provided over the entire ballast section. Ths test installation has been in service only a few months, and it is too early to judge its results. I mention it here as one experiment which has been aimed at preventing crushed stone ballast from becoming foul.

The roadbed has also received much attention in the past several years. In addition to general drainage of the surface water from the track, which has been recognized as so essential, soft spots and "squeezes" have been rather frequent in track in many sections of the United States. These locations require far more maintenance work than adjoining track on stable roadbed. Stabilization of soft spots and squeezes has received much attention. For many years tile pipe and rock drains were considered the best cure. Within recent years two additional methods have been introduced and quite successfully used. One of these consists of driving wooden piles or posts, just beyond the tie ends on one or both sides of the track. This provides a sort of retaining wall and imparts stability to that portion of the subsoil which is inclined to flow laterally. Another method which has been even more recently introduced consists of driving steel pipes at an angle into the roadbed, generally beyond the end of every other tie on one or both sides of the track, and of forcing cement grout through these pipes into the soft subsoil. This method has been used quite extensively on several railroads. All of these methods of roadbed stabilization are very important, not only because of the resultant economies of track maintenance labor, but also in order to provide the stable support needed for railway track necessary for very high speed train operation.

The present type of track structure and roadbed has, therefore, met the demands placed upon it in two different and distinct periods: one of greatly increased train speeds; the other of very great traffic density, and in my judgment it has given admirable account of itself. This does not mean, of course, that we should not and will not continue to improve it by taking advantage of every new technique that becomes available.

What situation will the railways and related industries face in the post war period? That is, of course, a matter on which we can only speculate. I believe most people expect a recession in business activity when war production ceases. The extent to which the recession of war production will be offset by the public demand which has accumulated during the war period, is difficult to foresee. However, it does seem to me that we can be sure of one thing. Looking over a long period of time and disregarding the fluctuations that occur in the space of a few years—we can expect a general rise in living standards, and attendant therewith, a continuing increase in the total amount of passenger travel and freight traffic. The competition between the various types of carriers for the traffic that is offered will no doubt be keen. However, each type of carrier has a certain sphere of usefulness for which it is particularly fitted. I do not see how the railroads can meet the competition of the airplane with respect to speed, nor of private cars with respect to convenience. The truck is indispensible for collection and delivery service and for short hauls. However, there remains

*(Continued on page 33)*

# National Crushed Stone Association Conducts a Short Course for Crushed Stone Salesmen

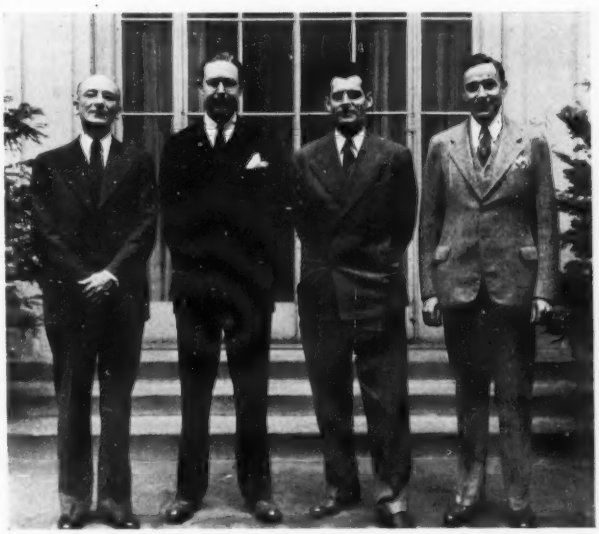
CRUSHED stone salesmen have to pursue many paths in the sale of their product, but it is clear that the way is eased when salesmen are thoroughly informed regarding the material they are selling. The idea of assisting salesmen to a fuller understanding of their product recently prompted the National Crushed Stone Association to hold a short course for the purpose of discussing the properties of aggregates, the methods for testing aggregates and methods for designing concrete and making calculations for concrete costs as influenced by different aggregates.

This, the first short course ever given by the National Crushed Stone Association, was held in Washington on January 27, 28 and 29, under admirable circumstances, in a room provided through the courtesy of the United States Chamber of Commerce. The course was directed by A. T. Goldbeck, Engineering Director of the N. C. S. A., ably assisted by D. G. Runner, Testing Engineer, Public Roads Administration, E. W. Bauman, Field Engineer, and J. E. Gray, Testing Engineer of the N. C. S. A.

Matters of a fundamental nature were presented and after each presentation the subject was thrown open to discussion by the entire audience. Mr. Runner, a staff member of the Division of Tests, Public Roads Administration, presented an amplification of the paper by him, published in the December 1943 issue of the Crushed Stone Journal, entitled, "Rocks, Their History, Classification and Properties." Mr. Runner's talk was given during the opening session and the afternoon of the first day was devoted to an inspection of methods of testing stone, concrete and bituminous materials in the laboratories of the Association. A moving picture was also shown of the testing of stone for highway construction.

Messrs. Goldbeck, Bauman and Gray alternated during the remaining portion of the course in the presentation of such matters as the measurement of size, gradation specifications, the meaning and measurement of specific gravity, its use in calculating voids and solid volumes and, finally, methods for calculating proportions of concrete for both structures and highways were explained. How to use these methods for figuring costs of concrete materials was presented in considerable detail. This is a subject of great importance to aggregate salesmen. Stone sand was touched on and also, aggregates for fireproofing. Bituminous mixtures were likewise discussed as thoroughly as time permitted. An attempt was made to have an interesting course that would not be too involved. By alternating instructors and by giving ample time for discussions and rest periods between the several presentations, the conference developed into a stimulating and profitable 3-day session.

Approximately seventy crushed stone salesmen were present, some of them coming from considerable distances, at least one from as far away as Texas. This is considered an excellent attendance and no doubt the time for holding the course, immediately preceding our annual convention, was a happy selection which made it possible for many of the salesmen to attend en route to the convention. That the subject matter interested the audience is fully at-



LECTURERS AT THE SHORT COURSE. *Left to Right:* A. T. GOLDBECK, D. G. RUNNER, E. W. BAUMAN, AND J. E. GRAY

tested by the fact that they stayed to the end, and, moreover, they thoroughly discussed everything that was presented. There is no doubt these discussions were very beneficial to everyone, including the instructors.

At the conclusion of the course, testimony was given to the effect that the course was extremely interesting and highly beneficial and it was thought desirable that it be repeated in the future. Just how and when a similar course should be given remains to be determined. There has been some sentiment for holding regional courses in different sections of the country, but that plan will depend on the result of future inquiries to determine the extent to which such regional courses may be desired. This much is certain; the first short course just given in Washington was successful far beyond our expectations and we are encouraged to believe that this kind of instructional work by the Association is really desired by our members. It will be continued and expanded as circumstances may permit. The first course dealt largely with matters of a fundamental nature and covered relatively few subjects. Probably the method of presenting the course can be improved and no doubt certain subjects should be given priority in future courses. We shall welcome any ideas that will help us improve the courses given in the future.

The following is a list of those registered at the first Short Course, according to our records:

**REGISTRATION LIST**

Acme Limestone Co.
A. W. McThenia, Fort Spring, W. Va.

Bessemer Limestone and Cement Co.
A. E. Harpold, Pittsburgh, Pa.

Bethlehem Steel Co.
Carl Beckler, Harrisburg, Pa.
H. W. Lynn, Bethlehem, Pa.
Geo. W. Weiss, Bethlehem, Pa.

Blue Ridge Stone Corp.
J. T. Wingfield, Roanoke, Va.

Callanan Road Improvement Co.
B. R. Babcock, Jr., South Bethlehem, N. Y.
Harry E. Batten, Jr., South Bethlehem, N. Y.
C. J. Griffin, South Bethlehem, N. Y.

Carbon Limestone Co.
Charles Coburn, Hillsville, Pa.
R. C. Shepard, Youngstown, Ohio

Catskill Mountain Stone Corp.
Leonard Marquoit, Catskill, N. Y.
Wm. H. Peckham, White Plains, N. Y.

Central Rock Co.
Sam Downing, Jr., Lexington, Ky.

Columbia Quarry Co.
H. C. Krause, St. Louis, Mo.
J. B. LaBarge, St. Louis, Mo.
Floyd W. Mumma, St. Louis, Mo.
R. H. Squier, St. Louis, Mo.
E. D. Van Cleave, St. Louis, Mo.

Delaware Testing Laboratory
I. H. Boggs, Dover, Delaware

East St. Louis Stone Co.
Wm. E. Hewitt, East St. Louis, Ill.
M. E. McLean, East St. Louis, Ill.

General Crushed Stone Co.
H. B. Allen, Philadelphia, Pa.
Chas. A. Reid, Boston, Mass.
B. P. Rex, Syracuse, N. Y.
John Rice, Jr., Easton, Pa.
Geo. E. Schaefer, Rochester, N. Y.
H. M. Van Cleve, Wilkes-Barre, Pa.

AMONG THOSE ATTENDING THE FIRST SHORT COURSE FOR SALESMEN
WASHINGTON, D. C., JANUARY 27-29, 1944

Jointa Limestone Co.
H. J. Russell, Glens Falls, N. Y.

Ed. J. Leary Construction Co.
Ed. J. Leary, River Falls, Wisconsin

Lehigh Stone Co.
D. C. Pickett, Kankakee, Ill.

Liberty Limestone Corp.
John R. Rice, Rocky Point, Va.

Marble Cliff Quarries Co.
Paul R. Anderson, Columbus, Ohio

National Crushed Stone Assn.
E. W. Bauman, Washington, D. C.
J. R. Boyd, Washington, D. C.
A. T. Goldbeck, Washington, D. C.
J. E. Gray, Washington, D. C.

New Haven Trap Rock Co.
P. J. Kelly, New Haven, Conn.
C. A. Munson, New Haven, Conn.
Ed. T. Perry, New Haven, Conn.
Donald E. Reigeluth, New Haven, Conn.
Robt. S. Rose, New Haven, Conn.

New York State Crushed Stone Assn.
Harry R. Hayes, Albany, N. Y.

New York Trap Rock Corp.
Girard Boyce, New York City
Carl J. Stenz, New York City

North American Cement Corp.
John G. Carroll, Washington, D. C.
Ralph N. Heck, Washington, D. C.
N. C. Heinmuller, Baltimore, Md.
John R. Hurley, Washington, D. C.
F. S. Schroeder, Baltimore, Md.
E. S. Story, Baltimore, Md.

Pekin Stone Products Corp.
R. B. Stewart, Lockport, N. Y.
E. K. Webster, Lockport, N. Y.

Pennsylvania Stone Producers Assn.
H. H. Wagner, Harrisburg, Pa.

Pittsburgh Limestone Corp.
Samuel H. Bell, Pittsburgh, Pa.
Alex R. Chambers, Pittsburgh, Pa.
Ed. A. Weymouth, Pittsburgh, Pa.

Pratt, Lassiter & Watkins
Ira B. Mullis, Raleigh, N. C.

Public Roads Administration
D. G. Runner, Washington, D. C.

Radford Limestone Co.
W. B. Bobbitt, Radford, Va.

Southern Ohio Quarries Co.
H. C. Slater, Columbus, Ohio

Southwest Stone Co.
E. V. Scott, Dallas, Texas

Standard Lime & Stone Co.
B. N. Allnutt, Washington, D. C.
Henry T. Boswell, Washington, D. C.
E. C. Mathias, Baltimore, Md.
Marshall E. Reed, Hagerstown, Md.
C. H. Slater, Baltimore, Md.
W. C. Thompson, Baltimore, Md.

Superior Stone Co.
Robt. B. Shepard, Raleigh, N. C.
P. A. Wallenborn, Charlotte, Va.

Virginian Limestone Corp.
D. L. Williams, Ripplemead, Va.

Warner Co.
Louis Levin, Philadelphia, Pa.

Weston & Broker Co.
J. D. Sands, Columbia, S. C.

Wallace Stone Co.
G. A. Carrington, Bay Port, Mich.

## Report on Business Conditions

(*Continued from page 10*)

Watsonville, Cal.

WILLIAM M. ANDREWS
Union Limestone Company

California volume crushed stone in 1943 approximately same as 1942. Prices remained constant as plants operating shift capacity. 1944 demand can drop one-third from 1943 with railroad ballast increasing in percentage of output. With decreasing volume prices are expected to become unstable. Serious railroad car shortage this area in 1943. Situation should ease in 1944 as new equipment becomes available and production decreases. Severe manpower shortage here and will continue until European War is over. Sorry I can't be with you this year. Best regards to all.

A. J. WILSON,
*Regional Vice-President.*

Thus it can be seen that the industry as a whole is facing curtailed operations and it would seem that this condition will probably prevail until we get started on the Post War construction. So let us all resolve to put our shoulders to the wheel and redouble our individual efforts to further all sound plans which will tend to ease our present situation and will result in increased business for our industry in the Post War Period.

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## Developments in Railroad Roadbed Construction

(*Continued from page 30*)

a broad field of transportation for which the railroad is intrinsically suited; that is, low-cost transportation of materials in large quantites with utmost dependability, and accommodations for passenger travel that can not be equalled by its competitors for comfort and safety, together with a speed which will meet the desires of probably the majority of travelers. So, in my judgment, the future picture for the railroad industry is one of broad opportunity. I feel sure that the railway managements and workers will continue to exert every effort to provide the American people with the type of transportation service they want and need, and this Association meeting here is evidence that each of those industries which supply the railways with needed materials are wide awake in their efforts to do their part and cooperate to the fullest extent towards that goal.

## Twenty-seventh Annual Convention

(*Continued from page 8*)

ful service to the Division, both as a member of its Board of Directors and as a Vice Chairman. His qualities of leadership and judgment admirably fit him for the chairmanship for the ensuing year.

Vice Chairmen and members of the Board of Directors of the Manufacturers' Division were elected as follows:

*Vice-Chairmen*

| | |
|---|---|
| J. C. FARRELL | L. C. MOSLEY |
| R. C. JOHNSON | C. H. ROBERTS |
| J. CRAIG MCLANAHAN | J. B. TERBELL |

**Board of Directors**

Milo A. Nice, *Chairman*, Hercules Powder Co., Wilmington, Del.
E. C. Anderson, Kensington Steel Co., Chicago, Ill.
Fred Braun, The W. S. Tyler Co., Cleveland, Ohio
A. E. Conover, Robins Conveyors, Inc., Passaic, N. J.
W. C. Davis, Atlas Powder Co., Wilmington, Del.
M. A. Eiben, Northern Blower Co., Cleveland, Ohio
J. C. Farrell, Easton Car & Construction Co., Easton, Pa.
J. Harper Fulkerson, Cross Engineering Co., Carbondale, Pa.
E. J. Goes, Koehring Co., Milwaukee, Wis.
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J. Craig McLanahan, McLanahan & Stone Corp., Hollidaysburg, Pa.
L. C. Mosley, Marion Steam Shovel Co., Marion, Ohio
R. M. Murdock, The Frog, Switch & Mfg. Co., New York City
F. O. Reedy, Kennedy-Van Saun Mfg. & Eng. Co., New York City
C. H. Roberts, Traylor Eng. & Mfg. Co., Allentown, Pa.
Bruce G. Shotton, Hendrick Mfg. Co., Pittsburgh, Pa.
L. W. Shugg, General Electric Co., Schenectady, N. Y.
P. C. Tennant, The Texas Co., New York City
J. B. Terbell, American Manganese Steel Division, The American Brake Shoe Co., New York City
J. A. Trainor, Taylor-Wharton Iron & Steel Co., High Bridge, N. J.
R. E. Wiley, American Cyanamid & Chemical Corp., New York City
Roy Wills, Lima Locomotive Works, Lima, Ohio
F. O. Wyse, Bucyrus-Erie Co., South Milwaukee, Wis.

In closing this brief account of our Twenty-Seventh Annual Convention, it seems appropriate to pay tribute to the management and entire staff of the Hotel New Yorker for the highly creditable manner in which they handled the convention under the severe difficulties imposed by the war.

## Shall We Win the War?

(*Continued from page 13*)

great assistance in attacking the two major problems—getting the blueprints ready, and inspiring public officials and leaders to get the finances ready.

Reports indicate that many highway agencies are lagging in the preparation of blue prints. One reason is understandable—lack of manpower. Yet there are indications that many highway leaders still do not see the urgency of getting the plans ready now, and so they are not putting on the pressure. On the other hand, quite a number of governments, notably New York City, the State of New York, the Texas Highway Department, the City of Portland, Washington and the State of Pennsylvania are doing a mighty fine job. Also we know that where the matter has been properly presented to highway leaders, the result has been an immediate step-up in plan preparation.

As for financing the program, every community should first look to its own resources. Many are regularly setting aside moneys from current income to build up postwar reserves. Others are pointing toward the elimination of diversion of highway funds. Many are studying the bond issue method, and others are considering the toll method on projects that are adapted to the collection of service charges. Yet, far too many communities are doing little or nothing.

Yes, there is plenty of work to be done and we need your help.

Friends, we cannot let our fighting boys down. Many of them will have been away from home a long time before the war ends. Let's give them the jobs and the opportunities they are dreaming about right now. When Johnny comes marching home, we must not greet him with a dole! Johnny does not ask for a guarantee of security; he only asks for a guarantee of opportunity. He asks for nothing more than you do in your business—the right to exercise your individual initiative and individual enterprise, free from dictation of the bureaucrats in Washington who know nothing of the needs or the workings of your business but, yet, try to regulate it.

When this war is won—and that is our first consideration—we must see to it that we have also won the peace, and we can only have peace at home by having full employment for the men who have left their jobs to fight for the American way of life and the land of opportunity where they can make their living as they see fit.

# MANUFACTURERS' DIVISION

of the

# NATIONAL CRUSHED STONE ASSOCIATION

**These associate members are morally and financially aiding the Association in its efforts to protect and advance the interests of the crushed stone industry. Please give them favorable consideration whenever possible.**

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*Cordeau-Bickford Detonating Fuse and Safety Fuse*

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# MANUFACTURERS' DIVISION of the NATIONAL CRUSHED STONE ASSOCIATION

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BULLETIN No. 1

The Bulking of Sand and Its Effect on Concrete

BULLETIN No. 2

Low Cost Improvement of Earth Roads with Crushed Stone

BULLETIN No. 3

The Water-Ratio Specification for Concrete and Its Limitations

BULLETIN No. 4

"Retreading" Our Highways

BULLETIN No. 5

Reprint of "Comparative Tests of Crushed Stone and Gravel Concrete in New Jersey" with Discussion

BULLETIN No. 6

The Bituminous Macadam Pavement

BULLETIN No. 7

Investigations in the Proportioning of Concrete for Highways

BULLETIN No. 8

The Effect of Transportation Methods and Costs on the Crushed Stone, Sand and Gravel, and Slag Industries

BULLETIN No. 9

Tests for the Traffic Durability of Bituminous Pavements

BULLETIN No. 10

Stone Sand

BULLETIN No. 11

A Method for Proportioning Concrete for Compressive Strength, Durability and Workability

*Single copies of the above bulletins are available upon request.*

Manual of Uniform Cost Accounting Principles and Procedure for the Crushed Stone Industry ($2.00 per copy)